STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 166036

TO: Ben Sackey **Location: 5b31 / 5c18** **Art Unit: 1626** **Monday, September 19, 2005** **Case Serial Number: 10/618744**	**From: Noble Jarrell** **Location: Biotech-Chem Library** **Rem 1B71** **Phone: 272-2556** **Noble.jarrell@uspto.gov**

Search Notes

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ACCESS DB # 166038

PLEASE PRINT CLEARLY

Scientific and Technical Information Center

SEARCH REQUEST FORM

Requester's Full Name: BEN SACKEY Examiner # : 73489 Date: 9/16/05

Art Unit: 1626 Phone Number: 2- 0704 Serial Number: 10/618,744

Location (Bldg/Room#): REM 5B31 Mailbox #): 5C18 Results Format Preferred (circle): ~~PAPER~~ DISK

****

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following: MEJ

Title of Invention: Phenolic group-Containing phosphonite Capd & process for

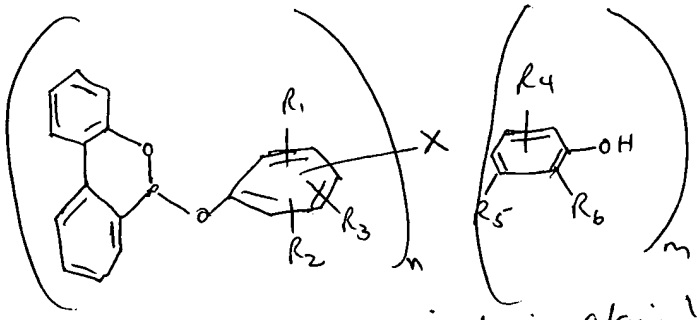
Inventors (please provide full names): Erica Lin et al. making Same

Earliest Priority Date: _____

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*



R'-R⁶ are as defined in claim 1

X is as defined

when n + m → 2 X is -S- or C1-8 alkylene etc

only claims 1-3.

Thanks

****

STAFF USE ONLY

Searcher: Noble

Searcher Phone #: _____

Searcher Location: _____

Date Searcher Picked Up: _____

Date Completed: 9/19/05

Searcher Prep & Review Time: 10

Online Time: 24

Type of Search

_____ NA Sequence (#)

_____ AA Sequence (#)

1 ✓ Structure (#)

_____ Bibliographic

_____ Litigation

_____ Fulltext

_____ Other

Vendors and cost where applicable

✓ STN _____ Dialog

_____ Questel/Orbit _____ Lexis/Nexis

_____ Westlaw _____ WWW/Internet

___ In-house sequence systems

___ Commercial ___ Oligomer ___ Score/Length

___ Interference ___ SPDI ___ Encode/Transl

_____ Other (specify)

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=> d his

     (FILE 'HOME' ENTERED AT 11:40:04 ON 19 SEP 2005)

     FILE 'HCAPLUS' ENTERED AT 11:40:14 ON 19 SEP 2005
L1            1 US2004204602/PN OR (US2003-618744# OR TW2003-092108102#)/AP,PRN

     FILE 'REGISTRY' ENTERED AT 11:42:47 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 11:42:47 ON 19 SEP 2005
L2             TRA L1 1- RN :       11 TERMS

     FILE 'REGISTRY' ENTERED AT 11:42:47 ON 19 SEP 2005
L3           11 SEA L2

     FILE 'WPIX' ENTERED AT 11:42:48 ON 19 SEP 2005
L4            1 L1

=> b hcap;d all l1
FILE 'HCAPLUS' ENTERED AT 11:47:32 ON 19 SEP 2005
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FILE COVERS 1907 - 19 Sep 2005  VOL 143 ISS 13
FILE LAST UPDATED: 18 Sep 2005  (20050918/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


L1   ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2005 ACS on STN
AN   2004:857222  HCAPLUS
DN   141:350863
ED   Entered STN:  18 Oct 2004
TI   Phenolic group-containing phosphonite compound and its manufacture as
     stabilizer for polymers
IN   Lin, Erica; Su, Ching-Yie
PA   Taiwan
SO   U.S. Pat. Appl. Publ., 7 pp.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  C07F009-02
INCL 558082000
CC   37-6 (Plastics Manufacture and Processing)
     Section cross-reference(s): 29
FAN.CNT 1
     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
PI   US 2004204602         A1    20041014    US 2003-618744          20030715 <--
     DE 102004013088       A1    20041104    DE 2004-102004013088    20040317 <--
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PRAI TW 2003-92108102 A 20030409 <--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
US 2004204602	ICM	C07F009-02	
	INCL	558082000	
US 2004204602	NCL	558/082.000	
	ECLA	C07F009/6571L6	<--
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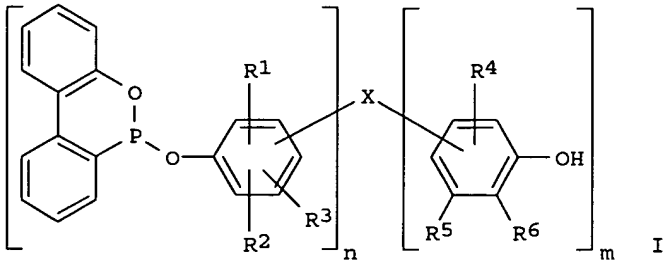
OS MARPAT 141:350863

GI



I

AB A phenolic group-containing phosphonite compound has formula I (R1-6 = H or C1-18-alkyl; n and m = 1-3; and the sum of n and m = 2-4; and X = S or C1-8 alkylene which may be optionally substituted with ≥1 C1-6-alkyl if the sum of n and m = 2, is a trivalent moiety of C3-C7 aliphatic group if the sum of n and m = 3, and is a tetravalent moiety of C4-C10 aliphatic group if the sum of n and m = 4). The compound 6-(4,4'-butylidene-2-tert-butyl-5-methylphenol-2'-tert-butyl-5'-methylphenoxy)dibenz[c,e]-[1,2]oxaphosphorine (preparation given) shows excellent thermal stability, the compound is only partially decomposed (≤48% is not decomposed) when the temperature reaches .apprx.400°.

ST heat stable antioxidant phenolic phosphonite

IT 2082-79-3, Octadecyl 3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate 3806-34-6, Cyclic neopentanetetrayl bis (octadecyl phosphite) 6683-19-8, Tetrakismethylene(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)methane 31570-04-4, Tris(2,4-di-tert-butylphenyl) phosphite
RL: MOA (Modifier or additive use); USES (Uses)
(addition stabilizer; phenolic group-containing phosphonite compound stabilizer for polymers)

IT 773105-02-5P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(phenolic group-containing phosphonite compound stabilizer for polymers)

IT 9003-53-6, Polystyrene
RL: POF (Polymer in formulation); USES (Uses)
(phenolic group-containing phosphonite compound stabilizer for polymers)

IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-56-9, Acrylonitrile-butadiene-styrene copolymer
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(phenolic group-containing phosphonite compound stabilizer for polymers)

IT 85-60-9, 4,4'-Butylidenebis(2-tert-butyl-5-methylphenol) 22749-43-5, 6-Chlorodibenz[c,e](1,2)oxaphosphorin
RL: RCT (Reactant); RACT (Reactant or reagent)
(phenolic group-containing phosphonite compound stabilizer for polymers)

=> b reg;d ide l3 tot

FILE 'REGISTRY' ENTERED AT 11:47:40 ON 19 SEP 2005

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 18 SEP 2005 HIGHEST RN 863382-78-9
DICTIONARY FILE UPDATES: 18 SEP 2005 HIGHEST RN 863382-78-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

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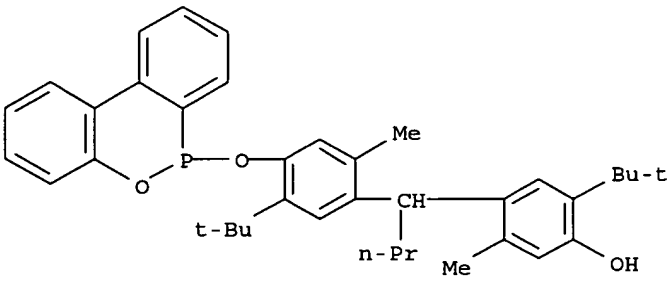
* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

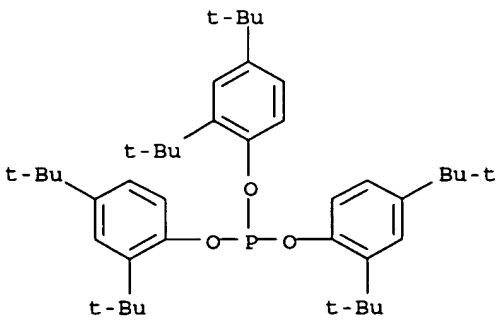
L3 ANSWER 1 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
RN 773105-02-5 REGISTRY
ED Entered STN: 01 Nov 2004
CN Phenol, 4-[1-[4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-5-(1,1-dimethylethyl)-2-methylphenyl]butyl]-2-(1,1-dimethylethyl)-5-methyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C38 H45 O3 P
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 2 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
RN 31570-04-4 REGISTRY
ED Entered STN: 16 Nov 1984
CN Phenol, 2,4-bis(1,1-dimethylethyl)-, phosphite (3:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:
CN Phenol, 2,4-di-tert-butyl-, phosphite (3:1) (8CI)
OTHER NAMES:
CN A 2112
CN ADK 2112
CN ADK Stab 2112
CN ADK Stab 2112RG
CN Alkanox 240
CN Antioxidant 168
CN AO 2
CN B 311
CN Chinox 168
CN Cyanox 2704
CN Doverphos S 480
CN Hostanox PAR 24
CN Hostanox TM-PAR 24
CN Hostanox VP-PAR 24
CN Irgafos 168
CN Irganox 168
CN JP 650
CN Mark 2112
CN Mark 2112E
CN Naugard 524
CN P 16
CN P 48
CN P 48 (stabilizer)
CN Phos 6
CN Phosphite 168
CN PKY 168
CN PL 10
CN PL 10 (stabilizer)
CN RA 168
CN RA 168 (antioxidant)
CN Sumilizer P 16
CN Tomiphos 202
CN Tris(2,4-di-tert-butylphenyl) phosphite
CN Tris(2,4-tert-butylphenyl) phosphite
CN Ultranox 668
FS 3D CONCORD
DR 754233-11-9, 478284-78-5, 129038-69-3, 104381-89-7, 69344-92-9, 219315-40-9
MF C42 H63 O3 P
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, PIRA, PROMT, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

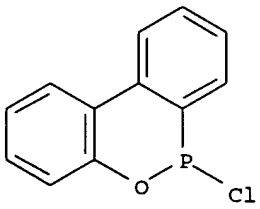


Search done by Noble Jarrell

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2099 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2100 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 3 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
RN **22749-43-5** REGISTRY
ED Entered STN: 16 Nov 1984
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6-chloro- (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 6-Chloro-6H-dibenz[c,e][1,2]oxaphosphorin
CN 6-Chlorodibenz[c,e][1,2]oxaphosphorin
FS 3D CONCORD
MF C12 H8 Cl O P
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMLIST, IFICDB, IFIPAT, IFIUDB, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

57 REFERENCES IN FILE CA (1907 TO DATE)
57 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 4 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
RN **9003-56-9** REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Propenenitrile, polymer with 1,3-butadiene and ethenylbenzene (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,3-Butadiene polymer, with acrylonitrile and styrene (6CI)
CN 1,3-Butadiene, polymer with ethenylbenzene and 2-propenenitrile (9CI)
OTHER NAMES:
CN 0215A
CN 06-10A
CN 10JK2
CN 15NP
CN 2020AST
CN 2501K
CN 3001M
CN 301K
CN 342EZ
CN 429J
CN 480S
CN 660SF
CN 757K
CN 88K4
CN 9715A
CN 9738R
CN 9815A
CN A 201

CN A 201 (styrene polymer)
CN A 402
CN A 404
CN A 404 (polymer)
CN A 50B
CN ABS
CN ABS (polymer)
CN ABS 1
CN ABS 10
CN ABS 12
CN ABS 130
CN ABS 150
CN ABS 170
CN ABS 180
CN ABS 200NT
CN ABS 2020
CN ABS 2501K
CN ABS 350
CN ABS 4
CN ABS 400
CN ABS 433
CN ABS 547P
CN ABS 55NP
CN ABS 60
CN ABS 606
CN ABS 900
CN ABS 9815
CN ABS copolymer
CN ABS N-WN
CN ABS plastic
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
DR 166091-25-4, 53637-30-2, 96827-60-0, 97048-04-9, 101484-40-6, 37229-19-9, 37331-48-9, 73990-12-2, 74238-96-3, 74238-98-5, 82346-94-9, 39291-19-5, 39306-83-7, 52433-83-7, 52434-26-1, 52434-32-9, 52682-91-4, 52907-26-3, 179865-29-3, 179865-39-5
MF (C8 H8 . C4 H6 . C3 H3 N)x
CI PMS, COM
PCT Polyacrylic, Polyolefin, Polystyrene
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, ASMDATA*, BIOBUSINESS, BIOSIS, CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PLASPEC*, PROMT, RTECS*, SCISEARCH, TOXCENTER, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

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CRN 107-13-1
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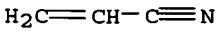

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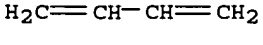

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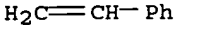
CMF C8 H8



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

19641 REFERENCES IN FILE CA (1907 TO DATE)
251 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
19651 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 5 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
RN 9003-53-6 REGISTRY
ED Entered STN: 16 Nov 1984
CN Benzene, ethenyl-, homopolymer (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 105E
CN 138F
CN 143E
CN 144C
CN 144CKG2
CN 145D
CN 145G
CN 147F
CN 148G
CN 148H
CN 158K
CN 158KR
CN 158L-KG2
CN 168M
CN 168N
CN 168N003 Clear
CN 168N15
CN 16ERA8
CN 1800P
CN 20SPH
CN 271T
CN 2D-MicroHex
CN 2V62F
CN 31N
CN 333AZY
CN 3A
CN 454H
CN 456M
CN 473E
CN 475K
CN 5020B
CN 5026B
CN 50IS
CN 550P
CN 550P (styrene polymer)
CN 615APR
CN 666D
CN 666R
CN 666U
CN 666U26
CN 678U
CN 679R
CN 685D

CN 685D-W
CN 686E
CN 76RES7116
CN 825TV-PS
CN 9M62
CN 9M62C
CN A & M Polystyrene 679
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
DR 471865-10-8, 12627-11-1, 9044-64-8, 9055-91-8, 11120-46-0, 172641-48-4, 172867-64-0, 53986-84-8, 54578-24-4, 54596-41-7, 58033-91-3, 56451-72-0, 56748-62-0, 57657-06-4, 124229-31-8, 124229-48-7, 55128-06-8, 55465-00-4, 60120-16-3, 60328-46-3, 120037-99-2, 63849-49-0, 25038-60-2, 98444-30-5, 105270-05-1, 51609-83-7, 51609-87-1, 60880-98-0, 61584-89-2, 61584-90-5, 137262-45-4, 78354-47-9, 144637-93-4, 86090-91-7, 81834-12-0, 39470-87-6, 40494-15-3, 52932-49-7, 53112-49-5, 157243-21-5, 219782-52-2, 260975-79-9, 359762-95-1, 360046-70-4
MF (C8 H8)x
CI PMS, COM
PCT Polystyrene
SR CA
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ASMDATA*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IPA, MEDLINE, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PLASPEC*, PROMT, RTECS*, SCISEARCH, SPECINFO, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

CM 1

CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

106298 REFERENCES IN FILE CA (1907 TO DATE)
9775 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
106386 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 6 OF 11 REGISTRY COPYRIGHT 2005 ACS on STN
RN 9003-07-0 REGISTRY
ED Entered STN: 16 Nov 1984
CN 1-Propene, homopolymer (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 001PF
CN 03P10/01
CN 04P10/01
CN 05P10-040
CN 1-Propene polymer
CN 1001A
CN 100GA02
CN 100GA03
CN 105PT
CN 1080F
CN 1148TC
CN 1184L
CN 1200FH

CN 120SPW-L
CN 1304F1
CN 13T10A
CN 1501F
CN 150AG3
CN 1640P
CN 1947H
CN 19MN10
CN 1EPP
CN 2000C
CN 2000C (polyolefin)
CN 202E
CN 215H
CN 219D
CN 21E953E866
CN 230M4
CN 243.4A
CN 24MB200
CN 25AT
CN 260LLG202
CN 260LLG302
CN 2K93K
CN 3030BN1
CN 3030FN1
CN 3050BN1
CN 3050MNI
CN 30AT
CN 31S07A
CN 31S3A
CN 3289MZ
CN 3355Z
CN 33MW247
CN 3435RG
CN 3501F
CN 3502L
CN 3522G
CN 3701T
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DR 457057-49-7, 9044-59-1, 162731-35-3, 171903-39-2, 122933-37-3, 53664-32-7, 58318-95-9, 131801-18-8, 123243-04-9, 60440-68-8, 132823-57-5, 133757-66-1, 95751-29-4, 104625-25-4, 37329-03-6, 37370-57-3, 112024-68-7, 112327-42-1, 112821-10-0, 139465-75-1, 73989-50-1, 144855-91-4, 76560-78-6, 148464-77-1, 143710-36-5, 52440-18-3, 52622-64-7, 156680-70-5, 169741-70-2, 178535-67-6, 186777-48-0, 220286-70-4, 223461-98-1, 262610-59-3, 268745-65-9, 286465-97-2, 301161-99-9, 313378-44-8, 313471-92-0, 343259-03-0, 349655-63-6, 368887-79-0, 391599-57-8, 399509-34-3, 582300-70-7
MF (C3 H6)x
CI PMS, COM
PCT Polyolefin
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ASMDATA*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PLASPEC*, PROMT, RTECS*, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

CM 1

CRN 115-07-1
CMF C3 H6

$H_3C-CH=CH_2$

<------User Break------>

=> b wpix;d all l4 tot
FILE 'WPIX' ENTERED AT 11:49:27 ON 19 SEP 2005
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FILE LAST UPDATED: 15 SEP 2005 <20050915/UP>
MOST RECENT DERWENT UPDATE: 200559 <200559/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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GUIDES, PLEASE VISIT:
http://thomsonderwent.com/support/userguides/ <<<

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>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.
PLEASE CHECK:
http://thomsonderwent.com/support/dwpiref/reftools/classification/code-revision/
FOR DETAILS. <<<
'BIX BI,ABEX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

L4 ANSWER 1 OF 1 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2004-765035 [75] WPIX
DNC C2004-268230
TI New phenolic group-containing phosphonite compound, useful as stabilizer for polymer.
DC A18 E11
IN LIN, E; SU, C
PA (DOUB-N) DOUBLE BOND CHEM IND CO LTD; (FDCL-N) FDC LEES CHEM IND CO LTD; (LINE-I) LIN E; (SUCC-I) SU C
CYC 2
PI US 2004204602 A1 20041014 (200475)* 7 C07F009-02 <--
DE 102004013088 A1 20041104 (200475) C07F009-655
ADT US 2004204602 A1 US 2003-618744 20030715; DE 102004013088 A1 DE 2004-102004013088 20040317
PRAI TW 2003-108102 20030409
IC ICM C07F009-02; C07F009-655
ICS C08K005-53; C08L023-00
AB US2004204602 A UPAB: 20041122
NOVELTY - Phenolic group-containing phosphonite compound (I) is new.
DETAILED DESCRIPTION - A phenolic group-containing phosphonite compound of formula (I) is new.
R1-R6 = H or 1-18C alkyl;
n, m = 1-3;
n+m = 2-4; and
X = (i) S or 1-8C alkylene optionally substituted with at least one 1-6C alkyl (if n + m is 2); (ii) trivalent moiety of 3-7C aliphatic group (if n + m is 3); or (iii) tetravalent moiety of 4-10C aliphatic group (if

n + m is 4).
INDEPENDENT CLAIMS are also included for:
(1) a polymer composition stabilized against oxygen, light and heat, comprising a polymer composition and phosphonite compound (I); and
(2) preparation of (I).
USE - Stabilizer for polymer.
ADVANTAGE - Compound (I) does not only combine the functions of phenolic compounds and phosphite but also possesses better thermal stability over phenolic compounds and phosphite.
Dwg.0/0
FS CPI
FA AB; GI; DCN
MC CPI: A08-A01A; E05-G01; E07-H03

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FILE 'HOME' ENTERED AT 11:49:33 ON 19 SEP 2005

=>

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=> d his

     (FILE 'HOME' ENTERED AT 11:40:04 ON 19 SEP 2005)

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L1            1 US2004204602/PN OR (US2003-618744# OR TW2003-092108102#)/AP,PRN

     FILE 'REGISTRY' ENTERED AT 11:42:47 ON 19 SEP 2005

     FILE 'HCAPLUS' ENTERED AT 11:42:47 ON 19 SEP 2005
L2              TRA L1 1- RN :        11 TERMS

     FILE 'REGISTRY' ENTERED AT 11:42:47 ON 19 SEP 2005
L3           11 SEA L2

     FILE 'WPIX' ENTERED AT 11:42:48 ON 19 SEP 2005
L4            1 L1

     FILE 'REGISTRY' ENTERED AT 11:54:23 ON 19 SEP 2005
L5              STR
L6            1 L5
L7           16 L5 FULL
L8            1 L7 AND L3
                SAV TEM L7 SAC744F0/A

     FILE 'HCAPLUS' ENTERED AT 12:04:07 ON 19 SEP 2005
L9           16 L7
                E LIN E/AU
L10         353 E3-20
                E LIN ERICA/AU
L11           1 E3
                E SU CH/AU
                E SU C/AU
L12         186 E3,E26
                E SU CHING/AU
L13           5 E31
                E SU CHINGYIE/AU
                E CHING S/AU
L14          25 E3-10
                E CHING SU/AU
                E FDC/CS,PA
                E FDCLESS/CS,PA
L15           1 L9 AND L10-14

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L16           0 L7

     FILE 'USPATFULL, USPAT2' ENTERED AT 12:07:54 ON 19 SEP 2005
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                E LIN ERICA/AU
L18           1 E3
                E SU C/AU
                E SU CHING/AU
L19           1 E17
                E SU CHINGYIE/AU
L20           1 L17 AND L18-19
L21           7 L17 NOT L20

     FILE 'HCAPLUS' ENTERED AT 12:09:50 ON 19 SEP 2005
L22          15 L9 NOT L15

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FILE 'REGISTRY' ENTERED AT 12:12:04 ON 19 SEP 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 18 SEP 2005 HIGHEST RN 863382-78-9
DICTIONARY FILE UPDATES: 18 SEP 2005 HIGHEST RN 863382-78-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

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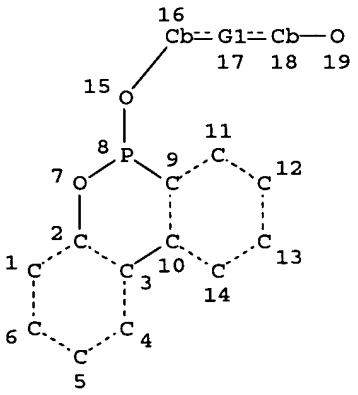
* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d que sta l7
L5 STR



VAR G1=AK/S
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY UNS AT 16
GGCAT IS MCY UNS AT 18
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE
L7 16 SEA FILE=REGISTRY SSS FUL L5

100.0% PROCESSED 1992 ITERATIONS 16 ANSWERS

SEARCH TIME: 00.00.01

=> b hcap
FILE 'HCAPLUS' ENTERED AT 12:12:21 ON 19 SEP 2005
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FILE COVERS 1907 - 19 Sep 2005 VOL 143 ISS 13
FILE LAST UPDATED: 18 Sep 2005 (20050918/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> d all fhitstr l15 tot

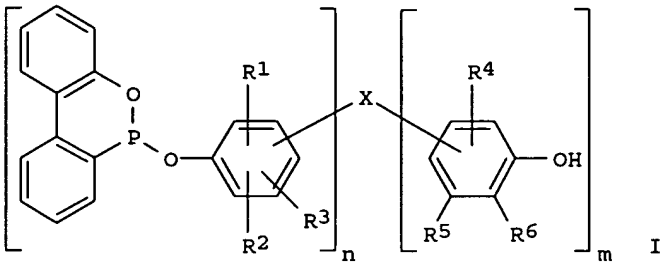
L15 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:857222 HCAPLUS
DN 141:350863
ED Entered STN: 18 Oct 2004
TI Phenolic group-containing phosphonite compound and its manufacture as
stabilizer for polymers
IN **Lin, Erica; Su, Ching-Yie**
PA Taiwan
SO U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C07F009-02
INCL 558082000
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 29
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004204602	A1	20041014	US 2003-618744	20030715
	DE 102004013088	A1	20041104	DE 2004-102004013088	20040317
PRAI	TW 2003-92108102	A	20030409		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004204602	ICM	C07F009-02
	INCL	558082000
US 2004204602	NCL	558/082.000
	ECLA	C07F009/6571L6
DE 102004013088	ECLA	C07F009/6571L6

OS MARPAT 141:350863
GI



AB A phenolic group-containing phosphonite compound has formula I (R1-6 = H or C1-18-alkyl; n and m = 1-3; and the sum of n and m = 2-4; and X = S or C1-8 alkylene which may be optionally substituted with ≥1 C1-6-alkyl if the sum of n and m = 2, is a trivalent moiety of C3-C7 aliphatic group if the sum of n and m = 3, and is a tetravalent moiety of C4-C10 aliphatic group if the sum of n and m = 4). The compound 6-(4,4'-butylidene-2-tert-butyl-5-methylphenol-2'-tert-butyl-5'-methylphenoxy)dibenz[c,e]-[1,2]oxaphosphorine (preparation given) shows excellent thermal stability, the compound is only partially decomposed (≤48% is not decomposed) when the temperature reaches .apprx.400°.

ST heat stable antioxidant phenolic phosphonite

IT 2082-79-3, Octadecyl 3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate 3806-34-6, Cyclic neopentanetetrayl bis (octadecyl phosphite) 6683-19-8, Tetrakismethylene(3,5-di-tert-butyl-4-hydroxyhydrocinnamate)methane 31570-04-4, Tris(2,4-di-tert-butylphenyl) phosphite
RL: MOA (Modifier or additive use); USES (Uses)
(addition stabilizer; phenolic group-containing phosphonite compound stabilizer for polymers)

IT **773105-02-5P**
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(phenolic group-containing phosphonite compound stabilizer for polymers)

IT 9003-53-6, Polystyrene
RL: POF (Polymer in formulation); USES (Uses)
(phenolic group-containing phosphonite compound stabilizer for polymers)

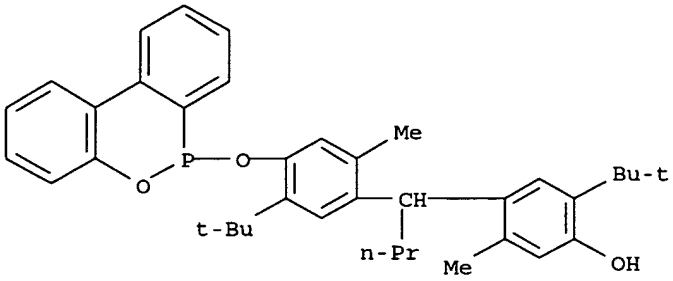
IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-56-9, Acrylonitrile-butadiene-styrene copolymer
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(phenolic group-containing phosphonite compound stabilizer for polymers)

IT 85-60-9, 4,4'-Butylidenebis(2-tert-butyl-5-methylphenol) 22749-43-5, 6-Chlorodibenz[c,e](1,2)oxaphosphorin
RL: RCT (Reactant); RACT (Reactant or reagent)
(phenolic group-containing phosphonite compound stabilizer for polymers)

IT **773105-02-5P**
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(phenolic group-containing phosphonite compound stabilizer for polymers)

RN 773105-02-5 HCAPLUS

CN Phenol, 4-[1-[4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-5-(1,1-dimethylethyl)-2-methylphenyl]butyl]-2-(1,1-dimethylethyl)-5-methyl- (9CI) (CA INDEX NAME)



=> d all hitstr l22 tot

L22 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:903958 HCAPLUS
DN 143:230763
ED Entered STN: 26 Aug 2005
TI Method for preparing arylphosphonite antioxidant
IN Su, Wen-Chiung; Wu, Tseng-Rong; Sheng, Chin-Shang
PA Chung Shan Institute of Science & Technology, Taiwan
SO U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C09K015-32
INCL 252400200
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 45
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005184277	A1	20050825	US 2004-983620	20041109
PRAI TW 2004-93104131	A	20040219		

CLASS

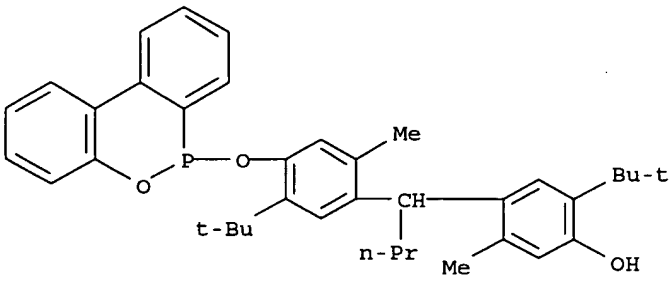
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005184277	ICM	C09K015-32
	INCL	252400200
US 2005184277	NCL	252/400.200

GI

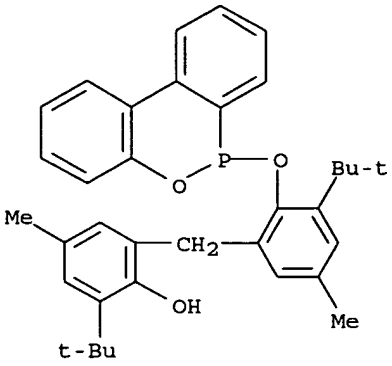
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A method for preparing an arylphosphonite antioxidant I (Ar is II or III.) comprises the steps of: (A) heating a 2-phenylphenol compound with a phosphorus trichloride compound in the present of a zinc chloride catalyst to obtain a 6-chloro-6H-dibenz[c,e][1,2]oxaphosphorin (IV); (b) removing the excess phosphorus trichloride; and (c) heating an organic solution of a di-hydroxylphenol of Ar-(OH)2 with IV to form the arylphosphonite antioxidant I.
ST arylphosphonite antioxidant prepn method
IT Antioxidants
(method for preparing arylphosphonite antioxidant for polymer composition)
IT 9002-88-4, Polyethylene
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(Formosa 9003; method for preparing arylphosphonite antioxidant for polymer composition)

IT 22749-43-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; method for preparing arylphosphonite antioxidant for polymer composition)
IT 85-60-9, 4,4'-Butylidenebis[2-tert-butyl-5-methylphenol]
RL: RCT (Reactant); RACT (Reactant or reagent)
(intermediate; method for preparing arylphosphonite antioxidant for polymer composition)
IT 7646-85-7, Zinc dichloride, uses
RL: CAT (Catalyst use); USES (Uses)
(method for preparing arylphosphonite antioxidant for polymer composition)
IT **773105-02-5P**, 6-(4,4'-Butylidene-2-tert-butyl-5-methylphenol-2'-tert-butyl-5'-methylphenoxy)dibenz[c,e][1,2]oxaphosphorin
862581-86-0P, 6-(2,2'-Methylene-6-tert-butyl-4-methylphenol-6'-tert-butyl-4'-methylphenoxy)dibenz[c,e][1,2]oxaphosphorin
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(method for preparing arylphosphonite antioxidant for polymer composition)
IT 9003-07-0
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(method for preparing arylphosphonite antioxidant for polymer composition)
IT 108-88-3, uses 108-90-7, Chlorobenzene, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; method for preparing arylphosphonite antioxidant for polymer composition)
IT 90-43-7, 2-Phenylphenol 119-47-1, 2,2'-Methylenebis[6-tert-butyl-4-methylphenol] 7719-12-2, Phosphorous trichloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; method for preparing arylphosphonite antioxidant for polymer composition)
IT **773105-02-5P**, 6-(4,4'-Butylidene-2-tert-butyl-5-methylphenol-2'-tert-butyl-5'-methylphenoxy)dibenz[c,e][1,2]oxaphosphorin
862581-86-0P, 6-(2,2'-Methylene-6-tert-butyl-4-methylphenol-6'-tert-butyl-4'-methylphenoxy)dibenz[c,e][1,2]oxaphosphorin
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(method for preparing arylphosphonite antioxidant for polymer composition)
RN 773105-02-5 HCAPLUS
CN Phenol, 4-[1-[4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-5-(1,1-dimethylethyl)-2-methylphenyl]butyl]-2-(1,1-dimethylethyl)-5-methyl- (9CI) (CA INDEX NAME)



RN 862581-86-0 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED



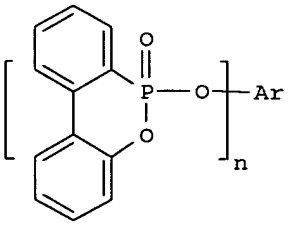
L22 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:409271 HCAPLUS
DN 142:463872
ED Entered STN: 13 May 2005
TI Method for preparing a biphenylphosphonate compound useful as flame retardant
IN Su, Wen-Chiung; Sheng, Chin-Shang
PA Chung Shan Institute of Science & Technology, Taiwan
SO U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C07F009-02
INCL 558082000
CC 29-7 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 50
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005101793	A1	20050512	US 2004-972396	20041026
PRAI TW 2003-92131729	A	20031112		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005101793	ICM	C07F009-02
	INCL	558082000
US 2005101793	NCL	558/082.000

OS MARPAT 142:463872
GI



I

AB A method for preparing biphenylphosphonate compound I (n = 2, 3; Ar = C6-C16 aromatic group), useful as flame retardant is described. Thus, reaction of o-phenylphenol with PCl3 in the presence of zinc chloride catalyst gave

6-chloro-6H-dibenz[c,e][1,2]oxaphosphorin which on sequential treatment with polyhydroxybenzene compound and oxidation gave title compound I.

ST biphenyl phosphonate prepn flame retardant; phenylphenol zinc chloride catalyzed phosphorylation; chlorodibenz oxaphosphorin prepn reaction polyhydroxybenzene oxidn

IT Fireproofing agents
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)

IT 7646-85-7, Zinc dichloride, uses
RL: CAT (Catalyst use); USES (Uses)
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)

IT 2752-19-4 105281-82-1
RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)

IT 80-05-7, Bisphenol A, reactions 87-66-1, 1,2,3-Trihydroxybenzene 90-43-7, o-Phenylphenol 108-46-3, Resorcinol, reactions 120-80-9, Catechol, reactions 123-31-9, Hydroquinone, reactions 1948-33-0, tert-Butylhydroquinone 7719-12-2, Phosphorus trichloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)

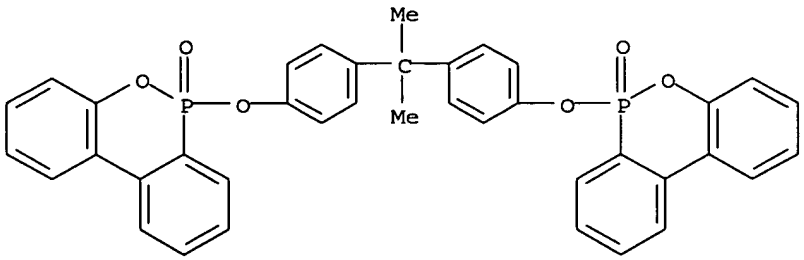
IT 22749-43-5P 32186-92-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)

IT 847452-97-5P **847452-98-6P** 851478-73-4P 851478-74-5P 851478-75-6P 851478-76-7P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)

IT **847452-98-6P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)

RN 847452-98-6 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, 6,6'-dioxide (9CI) (CA INDEX NAME)



L22 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:219885 HCAPLUS
DN 142:281496
ED Entered STN: 11 Mar 2005
TI Flame retardant polyester-based fibers for artificial hair
IN Masuda, Toshiyuki
PA Kaneka Corporation, Japan
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM D01F006-92
ICS A41D003-00
CC 40-10 (Textiles and Fibers)
FAN.CNT 1

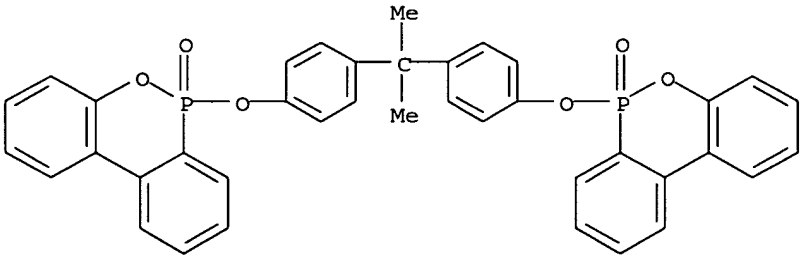
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005021848	A1	20050310	WO 2004-JP12039	20040816
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2005076147	A2	20050324	JP 2003-308371	20030901
PRAI JP 2003-308371	A	20030901		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005021848	ICM	D01F006-92
	ICS	A41D003-00
WO 2005021848	ECLA	D01F001/07; D01F006/62; D01F006/84
JP 2005076147	FTERM	4J002/BC022; 4J002/BD122; 4J002/BG002; 4J002/CF041; 4J002/CF051; 4J002/CF061; 4J002/CF071; 4J002/CF162; 4J002/CL002; 4J002/CP001; 4J002/DE108; 4J002/DE138; 4J002/DE148; 4J002/DE238; 4J002/DJ008; 4J002/DJ018; 4J002/DJ038; 4J002/DJ048; 4J002/DJ058; 4J002/EW136; 4J002/EW157; 4J002/FD136; 4J002/FD137; 4J002/FD138; 4J002/GB00; 4J002/GK00; 4L035/BB31; 4L035/BB72; 4L035/CC03; 4L035/DD08; 4L035/EE14; 4L035/JJ03; 4L035/JJ25; 4L035/JJ28; 4L035/KK01

OS MARPAT 142:281496
AB The fibers are manufactured by melt spinning either a composition obtained by melt-kneading 100 parts of (A) ≥1 polyesters selected among polyalkylene terephthalates (e.g., PET) and copolyesters consisting mainly of a polyalkylene terephthalate with 2-20 parts of (B) a cyclic organophosphorus compound and/or phosphoric ester amide compound or a composition obtained by mixing these ingredients with (C) fine organic particles and/or (D) fine inorg. particles. The artificial hair retains fiber properties inherent in general polyester fibers, such as heat resistance and strength/elongation, is excellent in flame retardancy, fixability, nondripping property, transparency, and unsusceptibility to devitrification, and has a controlled gloss.
ST polyalkylene terephthalate fireproofing agent phosphoric ester amide; cyclic organophosphorus compd fireproofing agent polyester fiber; flame retardant polyester fiber artificial hair
IT Fire-resistant materials
Fireproofing agents
Hair substitutes
(flame retardant polyester fibers for artificial hair)
IT Polyesters, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material

use); USES (Uses)
(flame retardant polyester fibers for artificial hair)
IT Polyester fibers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(flame retardant polyester fibers for artificial hair)
IT Polyester fibers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(poly(tetramethylene terephthalate); flame retardant polyester fibers for artificial hair)
IT Polyester fibers, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(terephthalic acid-trimethylene glycol; flame retardant polyester fibers for artificial hair)
IT 26062-94-2, Polybutylene terephthalate 26590-75-0, Polytrimethylene terephthalate
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(fibers, assumed monomers; flame retardant polyester fibers for artificial hair)
IT 24968-12-5, Polybutylene terephthalate 25038-59-9, Bellpet EFG 85A, uses 26546-03-2, Polytrimethylene terephthalate
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(fibers; flame retardant polyester fibers for artificial hair)
IT 113504-81-7 223268-28-8 847452-97-5 **847452-98-6** 847452-99-7 847453-00-3
RL: MOA (Modifier or additive use); USES (Uses)
(fireproofing agent; flame retardant polyester fibers for artificial hair)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Kaneka Corp; WO 2003008679 A1 2003
(2) Mitsubishi Rayon Co Ltd; JP 54-43546 A 1979
(3) Nippon Ester Kabushiki Kaisha; JP 63-185992 A 1988 HCAPLUS
(4) Toray Industries Inc; JP 3175222 B2 2001 HCAPLUS
(5) Toyobo Co Ltd; JP 53-56250 A 1978 HCAPLUS
IT **847452-98-6**
RL: MOA (Modifier or additive use); USES (Uses)
(fireproofing agent; flame retardant polyester fibers for artificial hair)
RN 847452-98-6 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, 6,6'-dioxide (9CI) (CA INDEX NAME)



L22 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:595057 HCAPLUS
DN 131:230267
ED Entered STN: 21 Sep 1999
TI Catalyst comprising a complex of a Group VIII metal and a phosphonite ligand and its use in hydroformylation
IN Maas, Heiko; Paciello, Rocco; Roper, Michael; Fischer, Jakob; Siegel, Wolfgang

PA BASF A.-G., Germany
SO PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM B01J031-18
ICS C07C045-50; C07F009-6571
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 67
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9946044	A1	19990916	WO 1999-EP1597	19990311
	W: CN, JP, KR, SG, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19810794	A1	19990916	DE 1998-19810794	19980312
	EP 1064093	A1	20010103	EP 1999-911776	19990311
	EP 1064093	B1	20030604		
	R: BE, DE, ES, FR, GB, IT, NL				
	JP 2002505945	T2	20020226	JP 2000-535451	19990311
	ES 2201686	T3	20040316	ES 1999-911776	19990311
	US 6440891	B1	20020827	US 2000-623175	20000829
PRAI	DE 1998-19810794	A	19980312		
	WO 1999-EP1597	W	19990311		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9946044	ICM	B01J031-18
	ICS	C07C045-50; C07F009-6571
WO 9946044	ECLA	B01J031/18C; C07F009/6574A6; C07C045/50; C07C253/30; C07F009/6571L6
DE 19810794	ECLA	B01J031/18C; C07C045/50; C07C253/30; C07F009/6571L6; C07F009/6574A6
US 6440891	NCL	502/162.000; 558/085.000; 568/449.000; 568/454.000; 568/903.000
	ECLA	B01J031/18C; C07C253/30; C07F009/6571L6; C07F009/6574A6; C07C045/50

OS MARPAT 131:230267
AB The catalysts comprise ≥1 Group VIII metal (especially Co, Ru, or Rh) complex containing ≥1 bidentate or multidentate phosponite ligand fitting a specified general structure or its salt. Compds. containing ≥1 ethylenically unsatd. double bond are hydroformylated by reaction with CO and H in the presence of such a catalyst, which may be formed in situ. Thus, 1,1'-biphenyl-2-ol was cyclocondensed with PCl3 to give 6-chloro-6H-dibenz[c,e][1,2]oxaphosphorin, which was condensed 2:1 with 1,1'-binaphthalene-2,2'-diol to give a suitable ligand (I). Hydroformylation of 1.5 g CH3CH:CHCH2CN in 1.5 g xylene containing 12.3 mg I and 0.75 mg dicarbonyl(2,4-pentanedionato)rhodium with 1:1 CO-H2 under Ar at 100°/80 bars for 4 h produced a mixture of formylvaleronitrile isomers in 57% yield.
ST metal bisphosphonite complex hydroformylation catalyst
IT Group VIII element complexes
RL: CAT (Catalyst use); USES (Uses)
(hydroformylation catalysts comprising a complex of a Group VIII metal and a multidentate phosphonite ligand)
IT Hydroformylation catalysts
(preparation of hydroformylation catalysts comprising a complex of a Group VIII metal and a multidentate phosphonite ligand)
IT 4635-87-4, 3-Pentenenitrile
RL: RCT (Reactant); RACT (Reactant or reagent)
(catalysts for hydroformylation of)
IT 7440-16-6D, Rhodium, complexes with multidentate phosphonite ligands, uses 7440-18-8D, Ruthenium, complexes with multidentate phosphonite ligands, uses 7440-48-4D, Cobalt, complexes with multidentate phosphonite ligands, uses

RL: CAT (Catalyst use); USES (Uses)
(hydroformylation catalysts)

IT 90-43-7, 1,1'-Biphenyl-2-ol 602-09-5, [1,1'-Binaphthalene]-2,2'-diol 7719-12-2, Phosphorus trichloride 14078-41-2 14874-82-9, Dicarbonyl(2,4-pentanedionato)rhodium
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of hydroformylation catalysts comprising a complex of a Group VIII metal and a multidentate phosphonite ligand)

IT 22749-43-5P, 6-Chloro-6H-dibenz[c,e][1,2]oxaphosphorin 214120-48-6P 214120-51-1P **214120-52-2DP**, Group VIII metal complexes 221525-01-5P **221525-10-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of hydroformylation catalysts comprising a complex of a Group VIII metal and a multidentate phosphonite ligand)

IT 214120-48-6D, Group VIII metal complexes 214120-51-1D, Group VIII metal complexes **214120-52-2D**, Group VIII metal complexes 221525-01-5D, Group VIII metal complexes **221525-10-6D**, Group VIII metal complexes 243857-91-2D, Group VIII metal complexes 243857-92-3D, Group VIII metal complexes
RL: CAT (Catalyst use); USES (Uses)
(preparation of hydroformylation catalysts comprising a multidentate phosphonite ligand)

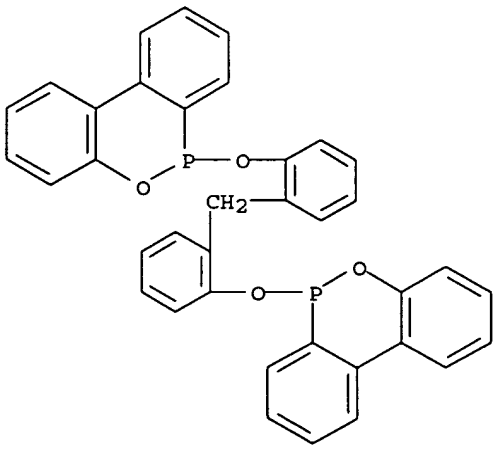
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Babin, J; US 5360938 A 1994 HCAPLUS
(2) Basf Ag; WO 9913983 A 1999 HCAPLUS
(3) Keiichi, S; US 5600032 A 1997 HCAPLUS
(4) Mitsubishi Chem Corp; JP 09255610 A 1997 HCAPLUS
(5) Packett, D; US 5312996 A 1994 HCAPLUS

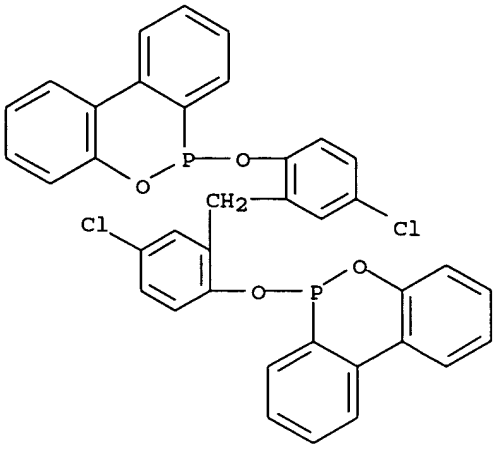
IT **214120-52-2DP**, Group VIII metal complexes **221525-10-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of hydroformylation catalysts comprising a complex of a Group VIII metal and a multidentate phosphonite ligand)

RN 214120-52-2 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis(2,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)

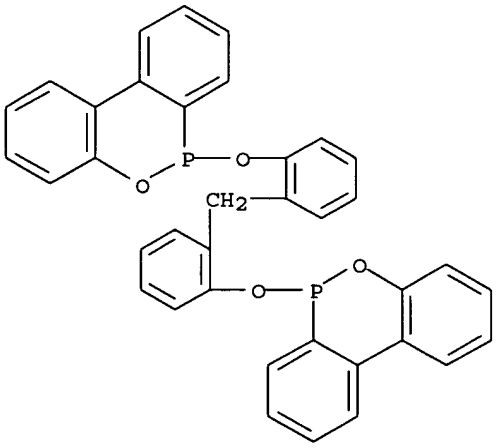


RN 221525-10-6 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-phenylene)oxy]]bis- (9CI) (CA INDEX NAME)

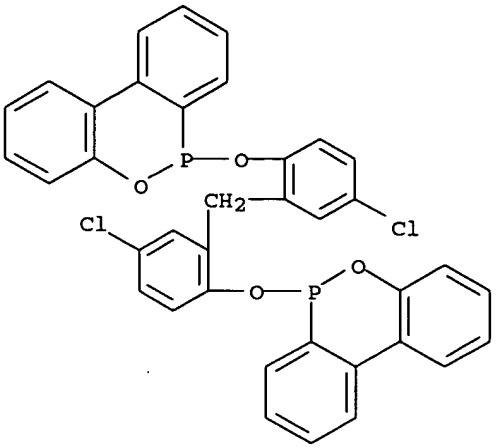
Search done by Noble Jarrell



IT **214120-52-2D**, Group VIII metal complexes **221525-10-6D**, Group VIII metal complexes
RL: CAT (Catalyst use); USES (Uses)
(preparation of hydroformylation catalysts comprising a multidentate phosphonite ligand)
RN 214120-52-2 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis(2,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



RN 221525-10-6 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:194390 HCAPLUS
DN 130:254051
ED Entered STN: 25 Mar 1999
TI Nickel complex catalyst having a cyclic phosphonite ligand, its preparation and use for hydrocyanation of butadienes
IN Fischer, Jakob; Siegel, Wolfgang
PA BASF A.-G., Germany
SO Ger. Offen., 21 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM B01J031-22
ICS C07F019-00; C07C255-07; C07C255-04; C07C253-10; C07B043-08; C07B037-08
ICA C07F015-04; C07F009-6574
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 67
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19740180	A1	19990318	DE 1997-19740180	19970912
	CA 2303776	AA	19990325	CA 1998-2303776	19980909
	WO 9913983	A1	19990325	WO 1998-EP5733	19980909
	W: AL, AU, BG, BR, BY, CA, CN, CZ, GE, HU, ID, IL, JP, KR, KZ, LT, LV, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, UA, US, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9895385	A1	19990405	AU 1998-95385	19980909
	BR 9812207	A	20000718	BR 1998-12207	19980909
	EP 1019190	A1	20000719	EP 1998-948941	19980909
	EP 1019190	B1	20041201		
	R: BE, DE, ES, FR, GB, IT, NL				
	TW 400249	B	20000801	TW 1998-87114963	19980909
	JP 2001516640	T2	20011002	JP 2000-511587	19980909
	ES 2234158	T3	20050616	ES 1998-948941	19980909
	MX 200001883	A	20001109	MX 2000-1883	20000223
	US 6242633	B1	20010605	US 2000-508051	20000307
	US 2001014647	A1	20010816	US 2001-782762	20010214
	US 6355833	B2	20010214		
PRAI	DE 1997-19740180	A	19970912		
	WO 1998-EP5733	W	19980909		
	US 2000-508051	A3	20000307		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 19740180	ICM	B01J031-22
	ICS	C07F019-00; C07C255-07; C07C255-04; C07C253-10; C07B043-08; C07B037-08
	ICA	C07F015-04; C07F009-6574
DE 19740180	ECLA	B01J031/18C; C07C253/10; C07C253/30; C07F009/6571L6; C07F015/04B
WO 9913983	ECLA	B01J031/18C; C07C253/10; C07C253/30; C07F009/6571L6; C07F015/04B
ES 2234158	ECLA	B01J031/18C; C07C253/10; C07C253/30; C07F009/6571L6; C07F015/04B
US 6242633	NCL	558/334.000; 558/338.000; 558/355.000
	ECLA	B01J031/18C; C07C253/30; C07F009/6571L6; C07F015/04B; C07C253/10
US 2001014647	NCL	502/162.000
	ECLA	B01J031/18C; C07C253/10; C07C253/30; C07F009/6571L6; C07F015/04B

OS MARPAT 130:254051

AB A Ni(0) complex having ≥1 cyclic phosphonite ligand, especially a 6-aryloxy-6H-dibenz[c,e][1,2]oxaphosphorin, catalyzes the addition of HCN to butadiene or its derivs. to form nonconjugated nitriles and/or adiponitrile. Thus, 2-hydroxybiphenyl was treated with PCl3 and the product cyclized with ZnCl2 and condensed with PhOH to give 6-phenoxy-6H-dibenz[c,e][1,2]oxaphosphorin (I). Treatment of a C4 fraction containing 40.50 volume% butadiene with HCN in toluene at 80° in the presence of bis(1,5-cyclooctadiene)nickel and I gave a mixture of C5 nitriles in 84% yield (based on HCN) having a 2.45:1 ratio of 3-pentenenitrile to 2-methyl-3-butenenitrile.

ST butadiene hydrocyanation nickel complex catalyst

IT Hydrocyanation catalysts
Isomerization catalysts
(nickel complexes having a cyclic phosphonite ligand)

IT 22749-43-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)

IT 645-59-0P, 3-Phenylpropionitrile 28906-50-5P, Methylglutaronitrile
RL: BYP (Byproduct); PREP (Preparation)
(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation)

IT 111-69-3P, Adiponitrile 1823-91-2P, 2-Phenylpropionitrile
RL: IMF (Industrial manufacture); PREP (Preparation)
(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation)

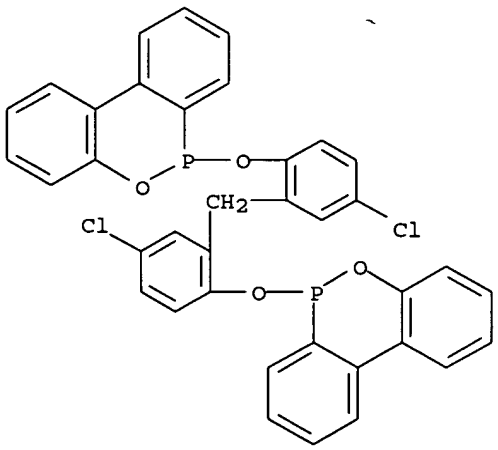
IT 100-42-5, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation)

IT 592-51-8P, 4-Pentenenitrile
RL: BYP (Byproduct); PREP (Preparation)
(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)

IT 7440-02-0D, Nickel, cyclic phosphonite complexes, uses 35948-27-7D, 6-Phenoxy-6H-dibenz[c,e][1,2]oxaphosphorin, nickel complexes
221524-76-1D, nickel complexes 221524-84-1D, nickel complexes
221524-90-9D, nickel complexes 221524-95-4D, nickel complexes
RL: CAT (Catalyst use); USES (Uses)
(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)

IT 16529-66-1P, trans-3-Pentenenitrile
RL: IMF (Industrial manufacture); PREP (Preparation)
(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)

IT 4635-87-4P, 3-Pentenenitrile 16529-56-9P, 2-Methyl-3-butenenitrile
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)
IT 106-99-0, 1,3-Butadiene, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)
IT 221525-01-5P **221525-10-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(potential intermediate; preparation of nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)
IT 90-43-7, 2-Hydroxybiphenyl 108-95-2, Phenol, reactions 1295-35-8, Bis(1,5-cyclooctadiene)nickel 14078-41-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)
IT 35948-27-7P, 6-Phenoxy-6H-dibenz[c,e][1,2]oxaphosphorin 221524-76-1P 221524-84-1P 221524-90-9P 221524-95-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)
IT **221525-10-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(potential intermediate; preparation of nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)
RN 221525-10-6 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:682212 HCAPLUS
DN 129:289879
ED Entered STN: 28 Oct 1998
TI Process for producing aldehydes
IN Urata, Hisao; Wada, Yasuhiro
PA Mitsubishi Chemical Corp., Japan
SO PCT Int. Appl., 89 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C07C047-02

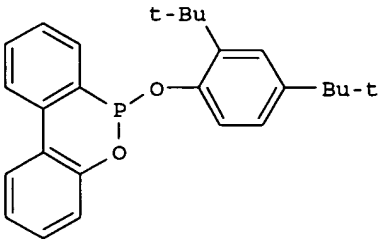
ICS C07C045-50; B01J031-24
CC 23-14 (Aliphatic Compounds)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9843935	A1	19981008	WO 1998-JP1362	19980326
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	JP 2003137831	A2	20030514	JP 1997-75530	19970327
	JP 2003137832	A2	20030514	JP 1997-75536	19970327
	AU 9865183	A1	19981022	AU 1998-65183	19980326
	US 6265620	B1	20010724	US 1999-381629	19990927
PRAI	JP 1997-75530	A	19970327		
	JP 1997-75536	A	19970327		
	WO 1998-JP1362	W	19980326		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9843935	ICM	C07C047-02
	ICS	C07C045-50; B01J031-24
WO 9843935	ECLA	B01J031/18C; C07C045/50
US 6265620	NCL	568/454.000; 568/451.000
	ECLA	B01J031/18C; C07C045/50

OS CASREACT 129:289879; MARPAT 129:289879
GI



I

AB In the title process, an olefinic compound is reacted with carbon monoxide and hydrogen in the presence of a catalyst containing a metal of the groups 8 to 10 and a trivalent organophosphorus compound, e.g., (Y3O)(Z3O)PX3 [X3 = (un)substituted hydrocarbon; Y3, Z3 = (un)substituted aromatic hydrocarbon]. Thus, propylene was treated with hydrogen/CO gaseous mixture in the presence of [Rh(OAc)(COD)]2 and phosphonite compound I in toluene at 70° under 10.0 atm for 1.0 h to give 100% aldehydes (n/i ratio = 1.3, n = butyraldehyde, i = isobutyraldehyde).

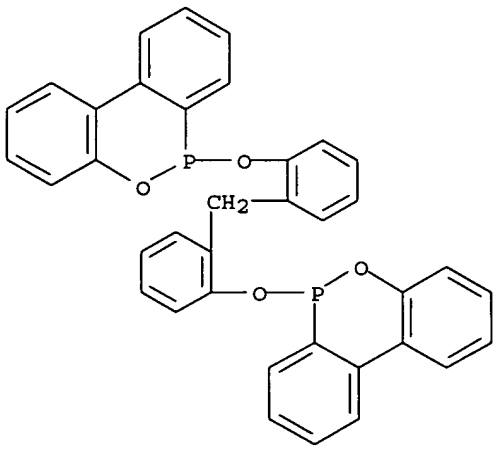
ST olefin hydroformylation catalyst; phosphonite catalyst hydroformylation olefin; carbon monoxide hydrogen hydroformylation olefin; aldehyde prepn

IT Hydroformylation catalysts
(process for producing aldehydes using catalysts containing groups 8 to 10 elements and phosphonites)

IT Aldehydes, preparation
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for producing aldehydes using catalysts containing groups 8 to 10 elements and phosphonites)

IT 12097-36-8 70135-06-7 70146-21-3 70240-08-3 133305-32-5 197570-46-0 197570-47-1 197570-48-2 214120-50-0 214120-51-1

214120-52-2 214120-53-3 214120-54-4
RL: CAT (Catalyst use); USES (Uses)
(process for producing aldehydes)
IT 197570-45-9P 214120-48-6P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(process for producing aldehydes)
IT 78-84-2P, Isobutyraldehyde 123-72-8P, Butyraldehyde
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(process for producing aldehydes)
IT 115-07-1, 1-Propene, reactions 630-08-0, Carbon monoxide, reactions 1333-74-0, Hydrogen, reactions 1806-29-7, 2,2'-Dihydroxybiphenyl 7001-04-9, 2,4-Di-tert-butyl-6-phenylphenol 22749-43-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for producing aldehydes)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Eastman Kodak Company; US 4400547 A 1983 HCAPLUS
(2) Mitsubishi Chemical Corp; US 5600032 A 1996 HCAPLUS
(3) Mitsubishi Chemical Corp; US 5712403 A 1996 HCAPLUS
(4) Mitsubishi Chemical Corp; JP 873389 A 1996
(5) Mitsubishi Chemical Corp; JP 09255610 A 1997 HCAPLUS
(6) Mitsubishi Chemical Corp; JP 09268152 A 1997 HCAPLUS
IT 214120-52-2
RL: CAT (Catalyst use); USES (Uses)
(process for producing aldehydes)
RN 214120-52-2 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis(2,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:484864 HCAPLUS
DN 121:84864
ED Entered STN: 20 Aug 1994
TI Polymer compositions with good stability to heat and light
IN Haruna, Tooru; Hida, Etsuo; Hamada, Rieko
PA Asahi Denka Kogyo KK, Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08K005-5393
ICS C08K005-3475; C08L101-00

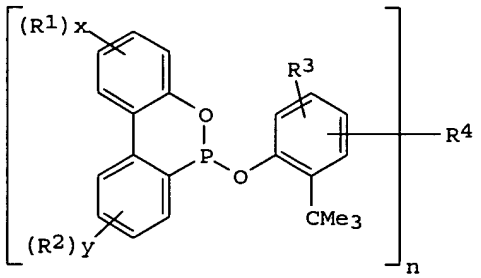
CC 37-6 (Plastics Manufacture and Processing)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05331313	A2	19931214	JP 1992-140790	19920601
PRAI	JP 1992-140790		19920601		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 05331313	ICM	C08K005-5393
	ICS	C08K005-3475; C08L101-00

OS MARPAT 121:84864
GI



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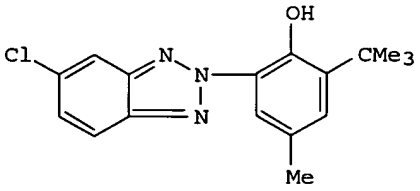
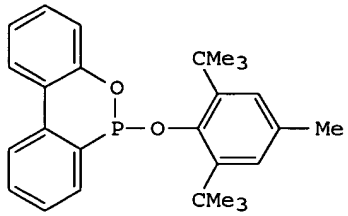


II



III

AB The title compns. contain polymers 100, phosphonites I 0.001-5, and 2-(2-hydroxyphenyl)benzotriazoles with ≥300 mol. weight 0.001-5 parts [R1, R2 = (un)substituted hydrocarbyl, halogen; x, y = 0-3, n = 1-3; R3 = H, C1-4 hydrocarbyl; R4 = (un)substituted aliphatic or aromatic aliphatic hydrocarbyl]. Thus, ethylene-propylene block copolymer 100, Ca stearate 0.05, pentaerythritol tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate] 0.1, II 0.1, and III 0.1 part were melt kneaded, pelletized, and injection molded at 250° to give test pieces showing (initially and after 5 repeated injection, resp.) melt flow rate 2.19 and 3.31 g/10-min, yellow index 4.31 and 6.01, discoloration (yellow index) 6.26 initially and 8.23 after 72 h at 150°, and gloss 73 with 98% retention after 1500 h in a sunshine weatherometer.

ST polymer compn phosphonite benzotriazole weatherability; heat stable polymer compn; light stable polymer compn; discoloration resistant polymer phosphonite benzotriazole

IT Polycarbonates, miscellaneous
RL: MSC (Miscellaneous)
(compns., containing phosphonites and benzotriazoles, heat- and light-stable)

IT Light stabilizers
(heat and, phosphonites and benzotriazoles, for polymers)

IT Heat stabilizers
(light and, phosphonites and benzotriazoles, for polymers)

IT Discoloration prevention
(of polymer compns., by phosphonites and benzotriazoles)

IT 25038-59-9, uses 25120-20-1, Acrylonitrile-butadiene-α-

methylstyrene-styrene copolymer 106565-43-9, Ethylene-propylene block copolymer
RL: USES (Uses)
(compns., containing phosphonites and benzotriazoles, heat- and light-stable)

IT 149963-04-2
RL: USES (Uses)
(crosslinked, compns., containing phosphonites and benzotriazoles, heat- and light-stable not: Almatex 110 is acrylic resin coating (Mitsui Toatsu Chems., Inc.))

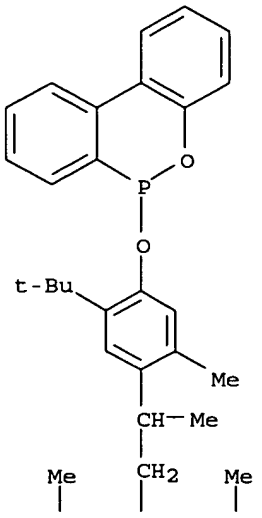
IT 35948-28-8 70135-03-4 **83937-13-7** 83937-14-8
152552-72-2 155343-18-3
RL: USES (Uses)
(polymer compns. containing, with benzotriazoles, for heat and light stability)

IT 155343-10-5 155343-11-6 155343-12-7 155343-13-8 155343-14-9
155343-15-0 155343-16-1 155343-17-2
RL: USES (Uses)
(polymer compns. containing, with phosphonites, for heat and light stability)

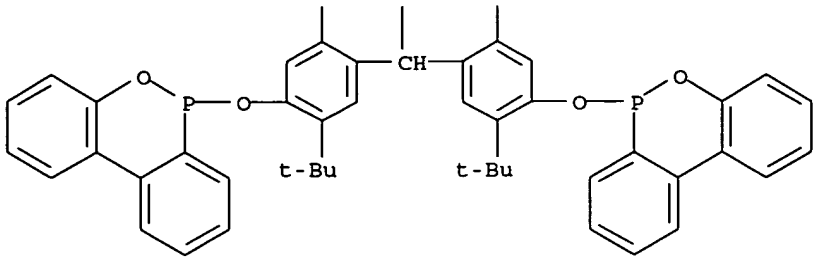
IT **83937-13-7 152552-72-2 155343-18-3**
RL: USES (Uses)
(polymer compns. containing, with benzotriazoles, for heat and light stability)

RN 83937-13-7 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris- (9CI) (CA INDEX NAME)

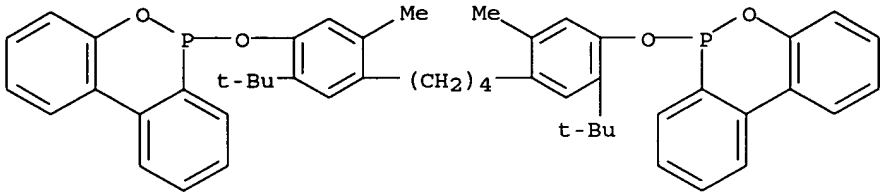
PAGE 1-A



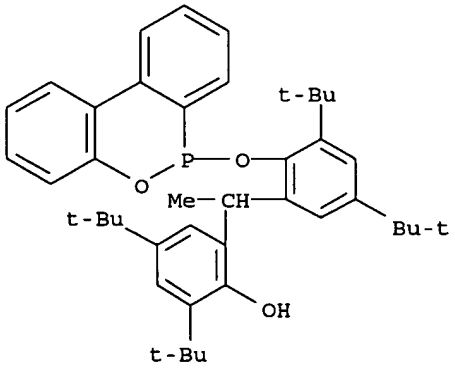
PAGE 2-A



RN 152552-72-2 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[1,4-butanediylbis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



RN 155343-18-3 HCAPLUS
CN Phenol, 2-[1-[2-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-3,5-bis(1,1-dimethylethyl)phenyl]ethyl]-4,6-bis(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



L22 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:78669 HCAPLUS
DN 120:78669
ED Entered STN: 19 Feb 1994
TI Rubber-modified styrene polymer compositions
IN Haruna, Tooru; Hida, Etsuo; Hamada, Rieko
PA Asahi Denka Kogyo KK, Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08L025-00
ICS C08K005-13; C08K005-53; C08L051-04
CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05222256	A2	19930831	JP 1992-28406	19920214
PRAI	JP 1992-28406		19920214		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 05222256	ICM	C08L025-00
	ICS	C08K005-13; C08K005-53; C08L051-04

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compns. with good heat resistance, weatherability, and appearance contain 0.001-5 phr phosphonite compds. I [R1-2 = C1-8 (un)substituted hydrocarbyl, halo; R3 = H, C1-4 alkyl; R4 = (un)substituted aliphatic or aromatic hydrocarbyl; x, y = 0-3; n = 1-3] and 0.01-5 phr phenol compds. II [R5-7 = H, C1-4 alkyl; R8 = H, Q]. Thus, a composition comprising high-impact polystyrene 100, ethylenebis(stearamide) 0.4, phosphonite compound III 0.15, and 4,4'-butylidenebis(6-tert-butyl-m-cresol) 0.15 part was melt kneaded, pelletized, and injection molded to give actest piece showing Izod impact strength 7.2 initially and 6.3 after 2-wk aging at 110° and yellowness index 12.0 initially and 15.6 after the aging.

ST phosphonite phenol polystyrene discoloration prevention; butylidenebisbutylcresol phosphonite stabilizer polystyrene

IT Heat stabilizers
(phosphonite compds. and phenol derivs., for rubber-modified polystyrene)

IT Phenols, uses
RL: USES (Uses)
(stabilizers, phosphonite compds. and, for rubber-modified polystyrene, for good discoloration resistance)

IT Discoloration prevention
(agents, phosphonite compds. and phenol derivs., for rubber-modified polystyrene)

IT 100-42-5D, Styrene, rubber-modified polymers
RL: USES (Uses)
(stabilizers for, phosphonite compds. and phenol derivs. as, with good impact and discoloration resistance)

IT 35948-28-8 70135-03-4 **83937-13-7** 83937-14-8 **152552-71-1** **152552-72-2**
RL: USES (Uses)
(stabilizers, phenol derivs. and, for rubber-modified polystyrene, for good discoloration resistance)

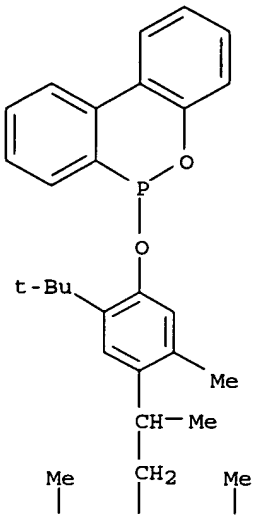
IT 85-60-9, 4,4'-Butylidenebis(6-tert-butyl-m-cresol) 1843-03-4
RL: USES (Uses)
(stabilizers, phosphonite compds. and, for rubber-modified polystyrene, for good discoloration resistance)

IT **83937-13-7** **152552-71-1** **152552-72-2**
RL: USES (Uses)
(stabilizers, phenol derivs. and, for rubber-modified polystyrene, for good discoloration resistance)

RN 83937-13-7 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris- (9CI) (CA INDEX NAME)

PAGE 1-A



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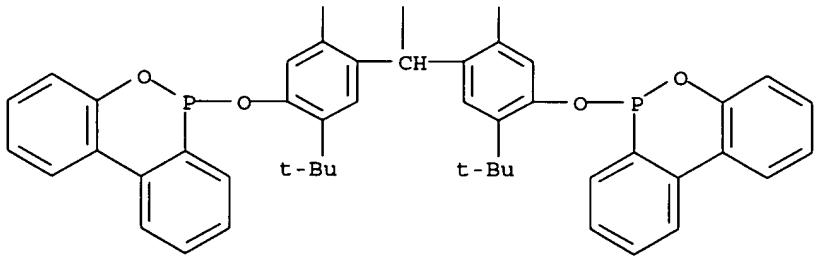
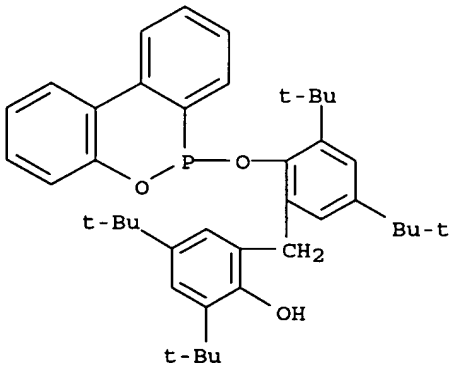
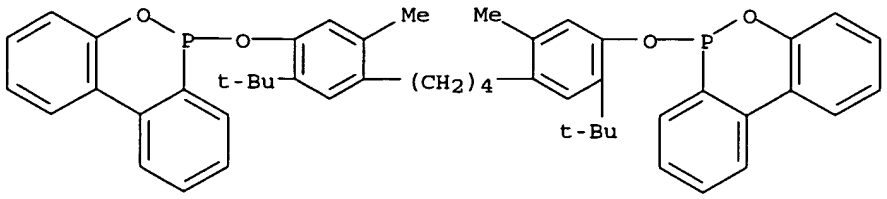


RN 152552-71-1 HCAPLUS
CN Phenol, 2-[[2-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-3,5-bis(1,1-dimethylethyl)phenyl]methyl]-4,6-bis(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



Search done by Noble Jarrell

RN 152552-72-2 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[1,4-butanediylbis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



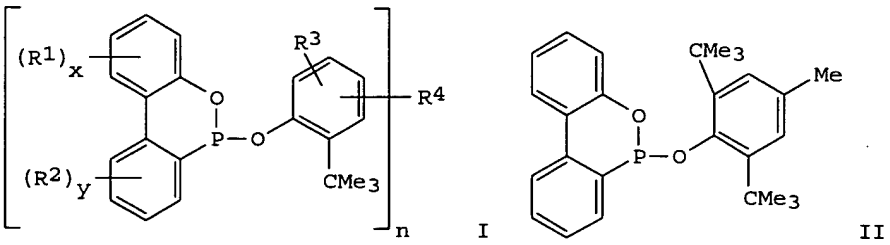
L22 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:78668 HCAPLUS
DN 120:78668
ED Entered STN: 19 Feb 1994
TI Polyolefin compositions with improved discoloration resistance
IN Haruna, Tooru; Hida, Etsuo; Hamada, Rieko
PA Asahi Denka Kogyo KK, Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08L023-00
ICS C08K003-26; C08K005-5393
CC 37-6 (Plastics Manufacture and Processing)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05222250	A2	19930831	JP 1992-28405	19920214
	JP 3248625	B2	20020121		
PRAI	JP 1992-28405		19920214		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 05222250	ICM	C08L023-00
	ICS	C08K003-26; C08K005-5393

GI



I II

AB The title compns. with good resistance to heat and light contain 0.005-5 phr phosphonite compds. I [R1-2 = C1-8 (un)substituted hydrocarbyl, halo; R3 = H, C1-4 alkyl; R4 = (un)substituted aliphatic or aromatic hydrocarbyl; x, y = 0-3; n = 1-3] and 0.005-5 phr hydrotalcites. Thus, a composition comprising ethylene-propylene block copolymer 100, pentaerythritol tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate] 0.1, DHT 4A [Mg4.5Al2(OH)13.CO3.3.5H2O] 0.1, and phosphonite compds. II 0.1 part was injection molded at 250° to give a test piece showing melt flow rate 2.36 g/10-min, yellowness index 4.52 initially and 5.15 after 72 h at 150°.

Search done by Noble Jarrell

ST phosphonite hydrotalcite polyolefin discoloration prevention; ethylene propylene copolymer discoloration resistance

IT Heat stabilizers
(phosphonite compds. and hydrotalcites, for polyolefins)

IT Discoloration prevention
(agents, phosphonite compds. and hydrotalcites, for polyolefins)

IT Alkenes, polymers
RL: USES (Uses)
(polymers, discoloration inhibitors for, phosphonite compds. and hydrotalcites as)

IT 106565-43-9, Ethylene-propylene block copolymer
RL: USES (Uses)
(discoloration inhibitors for, phosphonite compds. and hydrotalcites as)

IT 119758-00-8, Alcamizer 4
RL: USES (Uses)
(polyolefins containing, Alcamizer 4, phosphonite compds. and, for good discoloration resistance)

IT 11097-59-9, DHT 4A
RL: USES (Uses)
(polyolefins containing, DHT 4A, phosphonite compds. and, for good discoloration resistance)

IT 35948-28-8 70135-03-4 **83937-13-7** 83937-14-8
152552-71-1 152552-72-2
RL: USES (Uses)
(polyolefins containing, hydrotalcites and, for good discoloration resistance)

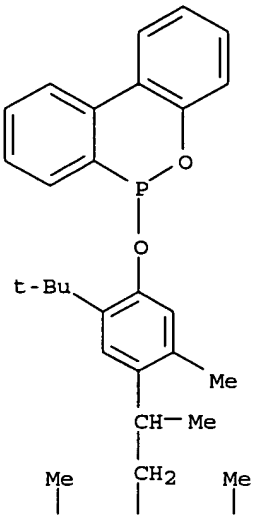
IT 12304-65-3, DHT 4A2 12539-23-0, Alcamizer 1
RL: USES (Uses)
(polyolefins containing, phosphonite compds. and, for good discoloration resistance)

IT **83937-13-7 152552-71-1 152552-72-2**
RL: USES (Uses)
(polyolefins containing, hydrotalcites and, for good discoloration resistance)

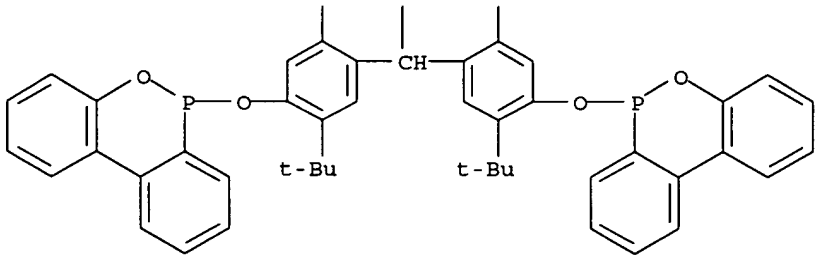
RN 83937-13-7 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris- (9CI) (CA INDEX NAME)

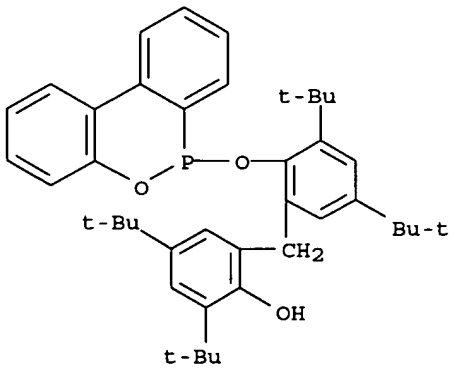
PAGE 1-A



PAGE 2-A

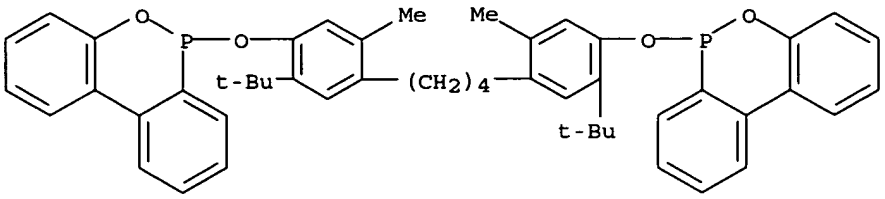


RN 152552-71-1 HCAPLUS
CN Phenol, 2-[[2-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-3,5-bis(1,1-dimethylethyl)phenyl]methyl]-4,6-bis(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



Search done by Noble Jarrell

RN 152552-72-2 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[1,4-butanediylbis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1987:599579 HCAPLUS
DN 107:199579
ED Entered STN: 27 Nov 1987
TI Epoxy resin compositions
IN Saruwatari, Koichi
PA Sanko Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08G059-42
ICS C08L063-00
CC 37-6 (Plastics Manufacture and Processing)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62070414	A2	19870331	JP 1985-210224	19850925
JP 04010899	B4	19920226		
PRAI JP 1985-210224		19850925		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 62070414	ICM	C08G059-42
	ICS	C08L063-00

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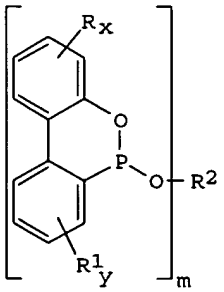


I

AB Compns. giving durable cured products contain (a) epoxy resins, (b) organic polybasic anhydrides, (c) hardening accelerators, and (d) organic P compds. I [R, R1 = halogen, halogen- or alkyl-substituted alkyl, aryl, aralkyl; R2 = OH-free organic residue; x, y = 0-3; m = 1-10] at weight ratios d/(a+b+c) = (0.1-20)/100. Thus, methylhexahydrophthalic anhydride 100, benzyldimethylamine 1, and I (R = R1 = H, R2 = C10H21, m = 1) (II) 2 g were mixed to prepare a liquid hardening agent, which was uniformly mixed with 100 g Araldite GY 250 (epoxy resin) and cured at 130° for 30 min.

The cured product showed water-whiteness and transparency both initially and after kept at 100° for 1000 h, compared with water-whiteness and somewhat discoloration, and severe discoloration, resp. for a cured product without II.

ST transparency cured epoxy resin; methylhexahydrophthalic anhydride hardener epoxy resin; org phosphorus compd heat stabilizer; oxaphosphaphenanthrene deriv heat stabilizer epoxy

IT Transparent materials
(anhydride-crosslinked epoxy resins, heat stabilizers for, oxaphosphaphenanthrene derivs. as)

IT Epoxy resins, uses and miscellaneous
RL: USES (Uses)
(anhydride-crosslinked, transparent, heat stabilizers for, oxaphosphaphenanthrene derivs. as)

IT Heat stabilizers
(oxaphosphaphenanthrene derivs., for transparent epoxy resins)

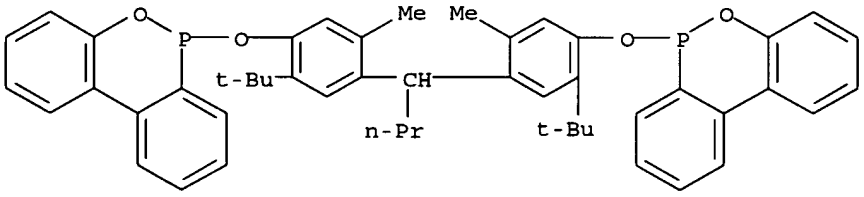
IT 52458-38-5 70135-06-7 73269-03-1 **83937-12-6** 110546-14-0
RL: MOA (Modifier or additive use); USES (Uses)
(heat stabilizers, for transparent epoxy resins)

IT 110835-63-7
RL: USES (Uses)
(transparent, heat stabilizers for, oxaphosphaphenanthrene derivs. as)

IT **83937-12-6**
RL: MOA (Modifier or additive use); USES (Uses)
(heat stabilizers, for transparent epoxy resins)

RN 83937-12-6 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[butylidenebis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1983:489101 HCAPLUS

DN 99:89101

ED Entered STN: 12 May 1984

TI White polyoxyphenylene compositions

PA Asahi-Dow Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

IC C08L071-04; C08K003-22; C08L025-04

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 58021444	A2	19830208	JP 1981-119366	19810731
PRAI JP 1981-119366		19810731		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 58021444	IC	C08L071-04IC C08K003-22IC C08L025-04

AB Poly[oxy(2,6-dimethyl-1,4-phenylene)] (I) [24938-67-8] compns. having whiteness (LAB) >89 contain I 20-60, rubbery polymer 3-10, TiO2 13-26, organic phosphonite 0.5-2.0, and polystyrene (II) [9003-53-6] 2.0-63.5%. Thus, a composition from I 30, high-impact II (containing 9% polybutadiene) 55, I

15, 10-(decyloxy)-9,10-dihydro-9-oxa-10-phosphaphenanthrene [52458-38-5] 2, 1,3,5-tris(3,5-di-tert-butyl-4-hydroxybenzyl)-s-triazine-1H,3H,5H-trione 0.75, and TiO2 25 parts gave an injection molding with whiteness 91, tensile strength 430 kg/cm2, elongation 25%, heat distortion temperature 107°, and Izod impact strength 9 kg-cm/cm.

ST polyoxyphenylene blend whiteness; butadiene rubber polyoxyphenylene blend; polystyrene polyoxyphenylene blend; phosphonite white polyoxyphenylene blend; phosphaphenanthrene white polyoxyphenylene blend; titania white polyoxyphenylene blend

IT Polyoxyphenylenes
RL: USES (Uses)
(blends with polystyrene and rubbers, containing organic phosphonites and titanium dioxide, white)

IT Rubber, butadiene, uses and miscellaneous
Rubber, butadiene-styrene, uses and miscellaneous
Rubber, ethylene-propene
Rubber, synthetic
RL: USES (Uses)
(in white polyoxyphenylene compns. containing titanium dioxide)

IT Plastics
RL: USES (Uses)
(polyoxyphenylene-polystyrene-rubber blends, containing organic phosphonites and titanium dioxide, white)

IT Rubber, synthetic
RL: USES (Uses)
(EPDM, in white polyoxyphenylene compns. containing titanium dioxide)

IT 24938-67-8 25134-01-4
RL: USES (Uses)
(blends with polystyrene and rubbers, containing organic phosphonites and titanium dioxide, white)

IT 9002-88-4 9003-29-6 9019-29-8 24937-78-8 25101-13-7 25102-52-7 26602-62-0 35948-27-7 38613-77-3 52458-38-5 70135-00-1 70135-06-7 70135-11-4 83937-08-0 **83937-13-7**
RL: USES (Uses)
(in white polyoxyphenylene compns. containing titanium dioxide)

IT 9003-53-6
RL: PRP (Properties)
(polyoxyphenylene blends, containing titanium dioxide, white)

IT 13463-67-7, uses and miscellaneous
RL: USES (Uses)
(polyoxyphenylene compns. containing, white)

IT 9003-55-8
RL: USES (Uses)
(rubber, butadiene-styrene; in white polyoxyphenylene compns. containing titanium dioxide)

IT 9003-17-2
RL: USES (Uses)
(rubber, butadiene; in white polyoxyphenylene compns. containing titanium dioxide)

IT 9010-79-1
RL: USES (Uses)
(rubber, ethylene-propene; in white polyoxyphenylene compns. containing titanium dioxide)

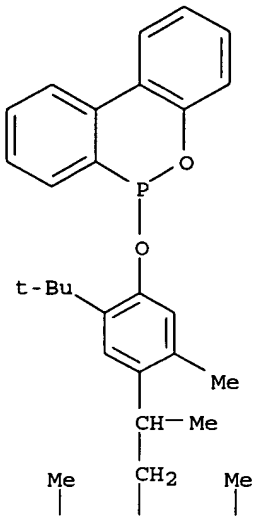
IT 9046-49-5 25034-71-3 25038-36-2
RL: USES (Uses)
(rubber, in white polyoxyphenylene compns. containing titanium dioxide)

IT **83937-13-7**
RL: USES (Uses)
(in white polyoxyphenylene compns. containing titanium dioxide)

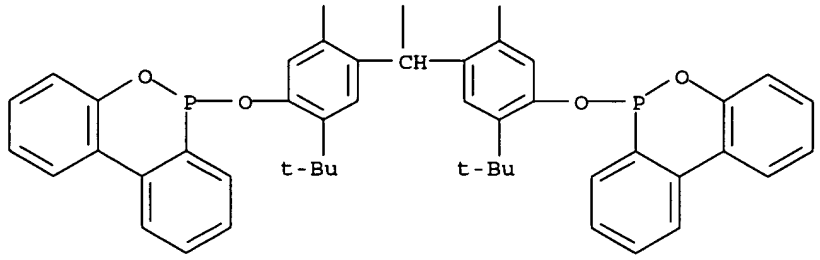
RN 83937-13-7 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



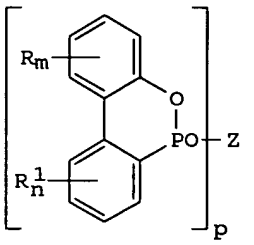
L22 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1983:35523 HCAPLUS
DN 98:35523
ED Entered STN: 12 May 1984
TI Cyclic phosphonite stabilizers
PA Asahi-Dow Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC C08L101-00; C08K005-53
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 29
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 57105456	A2	19820630	JP 1980-179720	19801220
PRAI JP 1980-179720		19801220		

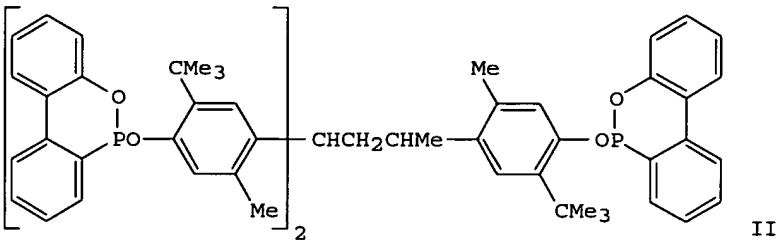
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

JP 57105456 IC C08L101-00IC C08K005-53
GI



I



II

AB Phosphonites (I; R,R1 = H, halogen, C1-18 alkyl, C1-18 alkoxy, aryl, aryloxy; m,n = 0-4; Z = p-valent group, p ≥ 2) are useful as stabilizers for organic substances. Thus, 0.1 part yellowish highly viscous phosphonite (II) [83937-13-7] and 0.3 part octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate were mixed with 100 parts ABS resin [9003-56-9]; the mixture was extruded and pelletized. A test specimen molded at >80° had impact strength 86% that of a specimen molded at >40°. For comparison, the ratio was 71% when II was replaced by tris(nonylphenyl) phosphite.

ST cyclic phosphonite stabilizer ABS resin; benzoxaphosphorin deriv stabilizer; stabilizer org substance cyclic phosphonite

IT Heat stabilizers
(cyclic phosphonite esters and polyols, for polymers)

IT Polycarbonates
RL: USES (Uses)
(stabilizers for, cyclic phosphonite esters and polyols as)

IT 9002-86-2 9002-88-4 9003-56-9 25038-59-9, uses and miscellaneous
32131-17-2, uses and miscellaneous
RL: USES (Uses)
(stabilizers for, cyclic phosphonite esters and polyols as)

IT 83954-01-2
RL: MOA (Modifier or additive use); USES (Uses)
(stabilizers, for PVC)

IT 84139-28-6
RL: USES (Uses)
(stabilizers, for polyamides)

IT **83937-12-6**
RL: USES (Uses)
(stabilizers, for polycarbonates)

IT **84139-29-7**
RL: USES (Uses)
(stabilizers, for polyesters)

IT 83937-17-1
RL: USES (Uses)
(stabilizers, for polyethylene)

IT **83937-13-7P**
RL: PREP (Preparation)
(stabilizers, manufacture of, for ABS resin)

IT 1843-03-4

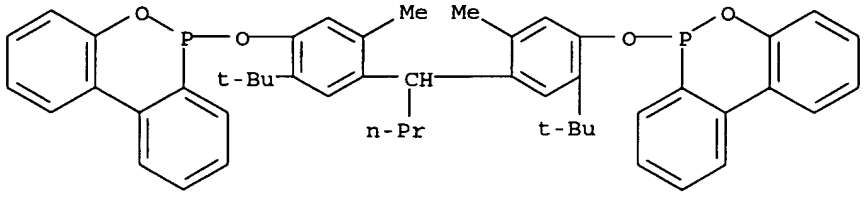
RL: RCT (Reactant); RACT (Reactant or reagent)
(transesterification by, of phenoxydibenzoxaphosphorin)

IT 35948-27-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(transesterification of, with trisphenols)

IT **83937-12-6**
RL: USES (Uses)
(stabilizers, for polycarbonates)

RN 83937-12-6 HCAPLUS

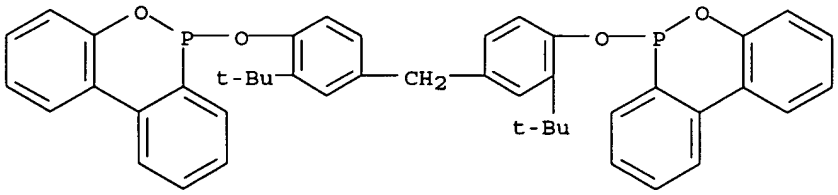
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[butylidenebis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



IT **84139-29-7**
RL: USES (Uses)
(stabilizers, for polyesters)

RN 84139-29-7 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[[2-(1,1-dimethylethyl)-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



IT **83937-13-7P**
RL: PREP (Preparation)
(stabilizers, manufacture of, for ABS resin)

RN 83937-13-7 HCAPLUS

CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris- (9CI) (CA INDEX NAME)

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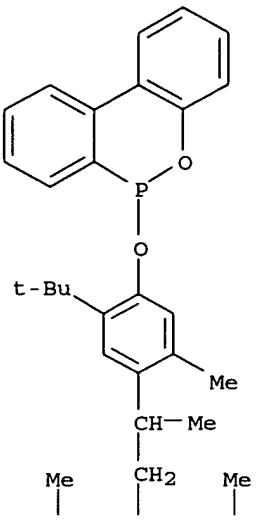

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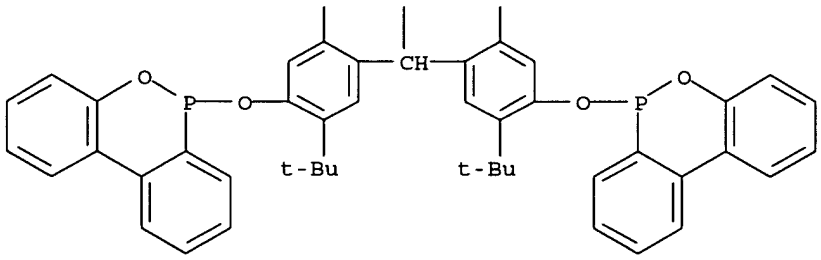


L22 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1983:17530 HCAPLUS
DN 98:17530
ED Entered STN: 12 May 1984
TI Heat-resistant polyoxyphenylene blends
PA Asahi-Dow Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC C08L071-04; C08K005-53; C08L025-04
ICI C08L071-04, C08L025-04, C08L021-00
CC 37-6 (Plastics Manufacture and Processing)
FAN.CNT 1

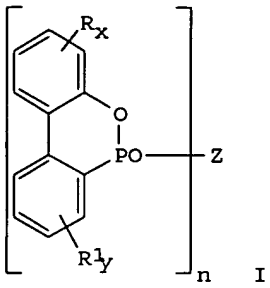
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57105451	A2	19820630	JP 1980-179712	19801220
PRAI	JP 1980-179712		19801220		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

JP 57105451 IC C08L071-04IC C08K005-53IC C08L025-04
ICI C08L071-04, C08L025-04, C08L021-00

GI



I

AB Impact-modified polyoxyphenylene compns. consisting of polyoxyphenylene 20-90, rubber 0-30, and styrene polymer 10-80% were compounded 94-99.9:6-0.1 with I (R, R1 = hydrocarbon group optionally containing halogen substituents; Z = residue of a compound containing m-OH groups; x, y = 0-3; m = 2-10) for improved heat resistance. For example, poly[oxy2,6-dimethyl-1,4-phenylene)] [24938-67-8] 45, high-impact polystyrene [9003-53-6] (containing 4% butadiene rubber) 55, and I (R,R1 = H; Z = 4-tert-butyl-1,3-phenylene; m = 2) (II) [83937-44-4] 1 part were blended and extruded at 200-90° to give a specimen with Hunter color difference (from control) 6.8, heat-distortion temperature 114°, tensile strength 4.78 kg/mm, Izod impact strength 20 kg-cm/cm, and elongation 58%, compared with -, 114, 4.30, 16, and 28, resp., for a control not containing II.

ST oxaphosphaphenanthrene heat stabilizer polyoxyphenylene blend; polystyrene polyoxyphenylene blend heat stabilizer; rubber polyoxyphenylene blend heat stabilizer

IT Heat stabilizers
(oxaphosaphenanthrene derivs., for impact-modified polyoxyphenylene blends)

IT Rubber, butadiene, uses and miscellaneous
Rubber, butadiene-styrene, uses and miscellaneous
Rubber, ethylene-propene
Rubber, nitrile, uses and miscellaneous
Rubber, synthetic
RL: USES (Uses)
(polyoxyphenylene blends, impact-resistant, heat stabilizers for)

IT Polyoxyphenylenes
RL: USES (Uses)
(styrene polymer blend, impact-resistant, heat stabilizers for, oxaphosphaphenanthrene derivs. as)

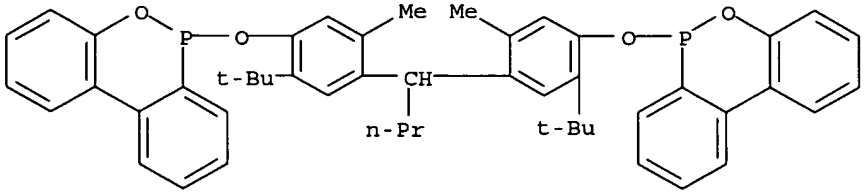
IT 73269-03-1 **83937-12-6** **83937-13-7** 83937-17-1
83937-39-7 83937-40-0 **83937-41-1** 83937-42-2 83937-43-3
83937-44-4 83954-01-2
RL: MOA (Modifier or additive use); USES (Uses)
(heat stabilizers, for impact-modified polyoxyphenylene blends)

IT 25034-86-0 25035-81-8 25085-34-1 25213-88-1 25586-23-6
25767-39-9 29353-33-1 30050-69-2 39410-02-1
RL: USES (Uses)
(polyoxyphenylene blends, for impact-resistant, heat stabilizers for, oxaphaphenanthrene derivs. as)

IT 9003-53-6 9003-54-7 9011-11-4 9011-13-6
RL: PRP (Properties)
(polyoxyphenylene blends, for impact-resistant, heat stabilizers for, oxaphaphenanthrene derivs. as)

IT 25053-09-2
RL: USES (Uses)
(polyoxyphenylene blends, impact-resistant, heat stabilizers for, oxaphosaphenanthrene derivs. as)

IT 9003-55-8
RL: USES (Uses)
(rubber, butadiene-styrene; polyoxyphenylene blends, impact-resistant, heat stabilizers for)
IT 9003-17-2
RL: USES (Uses)
(rubber, butadiene; polyoxyphenylene blends, impact-resistant, heat stabilizers for)
IT 9010-79-1
RL: USES (Uses)
(rubber, ethylene-propene; polyoxyphenylene blends, impact-resistant, heat stabilizers for)
IT 9003-18-3
RL: USES (Uses)
(rubber, nitrile; polyoxyphenylene blends, impact-resistant, heat stabilizers for)
IT 9002-88-4 9003-29-6 9019-29-8 24937-78-8 25034-71-3 25038-32-8 25038-36-2 25101-13-7 25102-52-7 26602-62-0 81987-13-5 83932-38-1
RL: USES (Uses)
(rubber, polyoxyphenylene blends, impact-resistant, heat stabilizers for, oxaphosphaphenanthrene derivs. as)
IT 24938-67-8 25134-01-4
RL: USES (Uses)
(styrene polymer blend, impact-resistant, heat stabilizers for, oxaphosphaphenanthrene derivs. as)
IT **83937-12-6 83937-13-7 83937-41-1**
RL: MOA (Modifier or additive use); USES (Uses)
(heat stabilizers, for impact-modified polyoxyphenylene blends)
RN 83937-12-6 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[butylidenebis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



RN 83937-13-7 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris- (9CI) (CA INDEX NAME)

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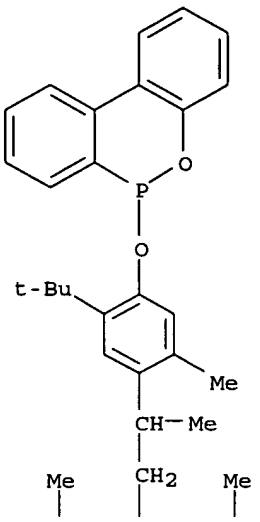
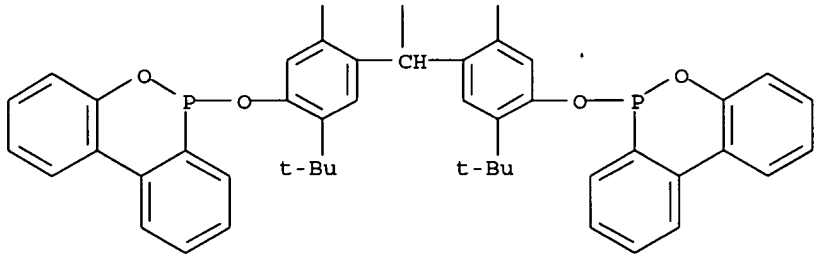
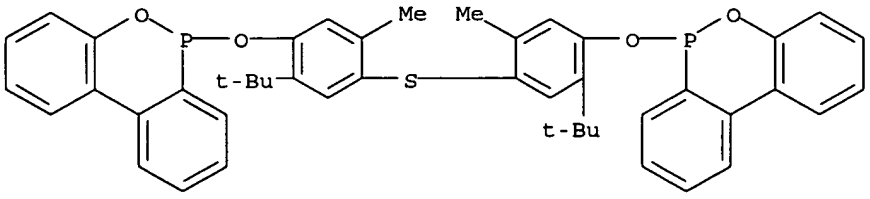


PAGE 2-A



RN 83937-41-1 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[thiobis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1983:5082 HCAPLUS
DN 98:5082
ED Entered STN: 12 May 1984
TI Light-resistant polyoxyphenylene blends
PA Asahi-Dow Ltd., Japan

Search done by Noble Jarrell

SO Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC C08L071-04; C08K005-50; C08K005-53; C08L025-04
ICI C08L071-04, C08L025-04, C08L021-00
CC 37-6 (Plastics Manufacture and Processing)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 57105452	A2	19820630	JP 1980-179715	19801220
PRAI JP 1980-179715		19801220		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 57105452	IC	C08L071-04IC C08K005-50IC C08K005-53IC C08L025-04
	ICI	C08L071-04, C08L025-04, C08L021-00

AB Impact-modified polyoxyphenylene compns. consisting of a polyoxyphenylene 20-60, an elastomeric polymer 0-30, and a styrene polymer 40-80% were incorporated, for improved light resistance with an aryl phosphonite 0.1-3, a UV absorber 0.1-3, and a sterically hindered phenol 0-2% (based on the final composition), with the total stabilizer content being 0.2-8%. Thus, an extrusion-molded specimen from poly[oxy(2,6-dimethyl-1,4-phenylene)] [24938-67-8] 35, high-impact polystyrene [9003-53-6] 65, 10-(2,6-di-tert-butylphenoxy)-9,10-dihydro-9-oxa-10-phosphaphenanthrene (I) [9003-29-6] 10, and 2-(2-hydroxy-5-methylphenyl)benzotriazole [2440-22-4] 0.75 part had Izod impact strength 19 kg-cm/cm and impact strength retention (after 200 h in a weatherometer 63° and relative humidity 50%) 83%, compared with 19 and 63, resp., for a control not containing I.

ST polyoxyphenylene polystyrene blend light stabilizer; phosphonite light stabilizer polyoxyphenylene blend; phosphaphenanthrene light stabilizer polyoxyphenylene blend; phenolic light stabilizer polyoxyphenylene blend; benzotriazole light stabilizer polyoxyphenylene blend

IT Light stabilizers
(aryl phosphonites and UV absorbers and hindered phenols, for polyoxyphenylene blends)

IT Polyoxyphenylenes
RL: USES (Uses)
(impact-modified, light stabilizers for)

IT Phenols, uses and miscellaneous
RL: USES (Uses)
(light stabilizers containing, for impact-modified polyoxyphenylene blends)

IT Rubber, butadiene, uses and miscellaneous
Rubber, butadiene-styrene, uses and miscellaneous
Rubber, nitrile, uses and miscellaneous
Rubber, synthetic
RL: USES (Uses)
(polyoxyphenylene blends, impact-resistant, light stabilizers for)

IT 24938-67-8 25134-01-4
RL: USES (Uses)
(impact-modified, light stabilizers for)

IT 13410-61-2 35948-27-7 35948-28-8 38613-77-3 52458-38-5
70135-00-1 70135-06-7 70135-11-4 70146-21-3 83896-38-2
83923-62-0 83923-63-1 83923-64-2 83923-65-3 83937-04-6
83937-05-7 83937-06-8 83937-07-9 83937-08-0 83937-09-1
83937-10-4 83937-47-7 83953-98-4
RL: USES (Uses)
(light stabilizers containing, for impact-modified polyoxyphenylene blends)

IT 79-74-3 85-28-9 85-60-9 88-24-4 88-58-4 90-68-6 94-01-9
96-66-2 96-69-5 118-55-8 118-82-1 119-47-1 128-37-0, uses and miscellaneous 131-54-4 131-55-5 131-56-6 131-57-7 976-56-7
991-84-4 1620-93-5 1709-70-2 1843-03-4 1843-05-6 2082-79-3
2162-63-2 2440-22-4 2658-23-3 2985-59-3 3135-18-0 3147-76-0
3147-77-1 3846-71-7 3864-99-1 3896-11-5 4192-61-4 5188-31-8

6683-19-8 13676-82-9 14894-91-8 15188-12-2 15618-85-6 17831-67-3
18824-08-3 22607-31-4 22617-00-1 23128-74-7 25973-55-1
27479-27-2 27676-62-6 30590-53-5 30596-65-7 30596-66-8
32509-66-3 33145-10-7 34137-09-2 35074-76-1 35074-77-2
36437-37-3 38080-24-9 38358-77-9 41484-35-9 57569-40-1
60699-47-0 70135-03-4 74734-21-7 83937-11-5 **83937-12-6**
83937-13-7 83937-14-8 **83937-15-9** 83937-16-0
83937-17-1 83937-18-2 83937-19-3 83937-20-6 83937-21-7
83953-99-5 83954-00-1
RL: USES (Uses)
(light stabilizers, for impact-modified polyoxyphenylene blends)

IT 9002-88-4 25034-86-0 25035-81-8 25213-88-1 25586-23-6 25767-39-9
29353-33-1 30050-69-2 39410-02-1
RL: USES (Uses)
(polyoxyphenylene blends, impact-resistant, light stabilizers for)

IT 9003-53-6 9003-54-7 9003-55-8 9003-55-8D, hydrogenated 9011-11-4
9011-13-6
RL: PRP (Properties)
(polyoxyphenylene blends, impact-resistant, light stabilizers for)

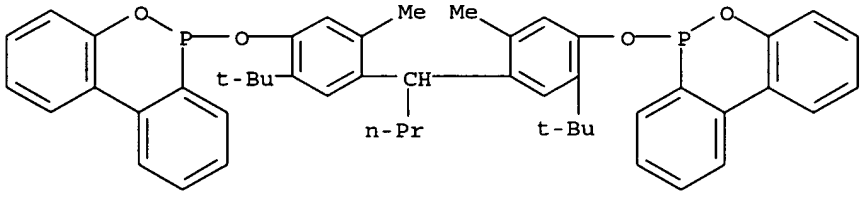
IT 9003-17-2
RL: USES (Uses)
(rubber, butadiene; polyoxyphenylene blends, impact-resistant, light stabilizers for)

IT 9003-18-3
RL: USES (Uses)
(rubber, nitrile; polyoxyphenylene blends, impact-resistant, light stabilizers for)

IT 9003-29-6 9019-29-8 9046-49-5 24937-78-8 25038-32-8 25038-36-2
25101-13-7 25102-52-7 26602-62-0 81987-13-5 83932-38-1
RL: USES (Uses)
(rubber, polyoxyphenylene blends, impact-resistant, light stabilizers for)

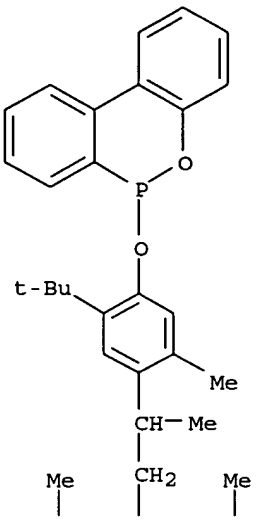
IT **83937-12-6 83937-13-7 83937-15-9**
RL: USES (Uses)
(light stabilizers, for impact-modified polyoxyphenylene blends)

RN 83937-12-6 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[butylidenebis[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



RN 83937-13-7 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6',6''-[(1-methyl-1-propanyl-3-ylidene)tris[[2-(1,1-dimethylethyl)-5-methyl-4,1-phenylene]oxy]]tris- (9CI) (CA INDEX NAME)

PAGE 1-A



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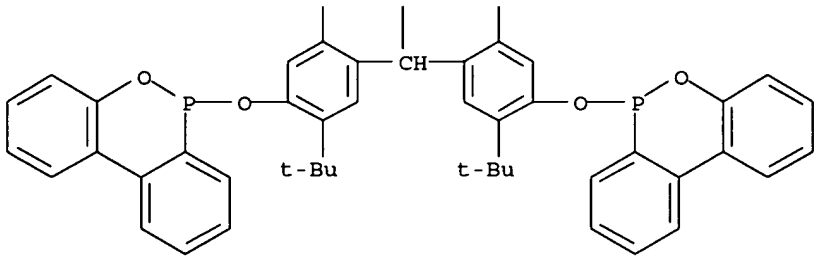
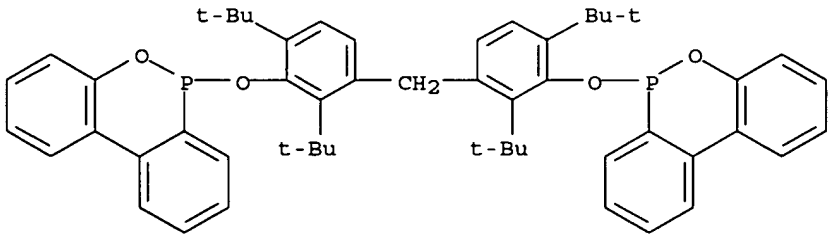


RN 83937-15-9 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[[2,6-bis(1,1-dimethylethyl)-3,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1980:146908 HCAPLUS
DN 92:146908
ED Entered STN: 12 May 1984
TI Cyclic phosphonite stabilizers

Search done by Noble Jarrell

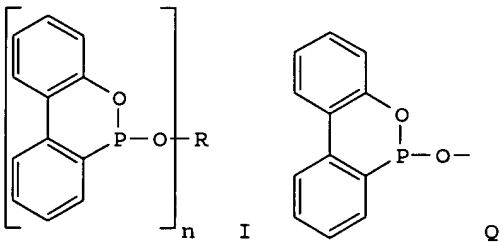
IN Rasberger, Michael; Spivack, John D.
PA Ciba-Geigy Corp., USA
SO U.S., 11 pp.
CODEN: USXXAM
DT Patent
LA English
IC C07F009-48; C07F009-65; C08K005-53
INCL 260045800N
CC 29-7 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 35, 36, 37
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4185006	A	19800122	US 1978-922394	19780706
DE 2926897	A1	19800124	DE 1979-2926897	19790703
JP 55011597	A2	19800126	JP 1979-85814	19790706
PRAI US 1978-922394	A	19780706		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4185006	IC	C07F009-48IC C07F009-65IC C08K005-53
	INCL	260045800N
US 4185006	NCL	524/100.000; 524/099.000; 524/101.000; 524/106.000; 524/118.000; 524/119.000; 524/310.000; 558/076.000; 558/082.000; 987/045.000; 987/353.000; 987/357.000

GI

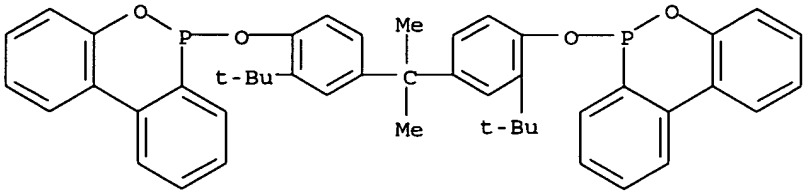


AB Eight title phosphonites I (R = an n-valent aliphatic, alicyclic, aromatic or araliph. which may contain N, O or S or heterocyclics; n = 2-6) were prepared by esterification of 6-chlorodibenz[c,e][1,2]oxaphosphorine (II) with a polyol, Q(OH)n. Thus, 0.1 mol 2,5-di-tert-butylhydroquinone and 0.2 mol II were heated 3 h at 200° to give 2,5-(Me3C)2C6H2Q2-1,4. Similarly prepared were [4,3-Q(Me3C)C6H3]2CMe2, (QCH2)2CMe2 and (QCH2CH2)2S. I were polymer stabilizers, e.g., for polypropylene.
ST polymer cyclic phosphonite stabilizer; polypropylene cyclic phosphonite stabilizer; chlorodibenzoxaphosphorine polyol esterification; diol esterification chlorodibenzoxaphosphorine
IT Polymers, uses and miscellaneous
RL: USES (Uses)
(stabilizers for, cyclic phosphonites as)
IT 9003-07-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclic-phosphonite stabilizers for)
IT 22749-43-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of, with dihydroxyalkanes and -arenes)
IT 73269-03-1P **73269-04-2P** **73269-05-3P** 73269-06-4P
73269-07-5P 73269-08-6P **73274-19-8P** 73284-38-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and polymer-stabilizing activity of)
IT 79-96-9 88-58-4 111-48-8 118-82-1 126-30-7 629-11-8 903-19-5 52785-98-5
RL: RCT (Reactant); RACT (Reactant or reagent)

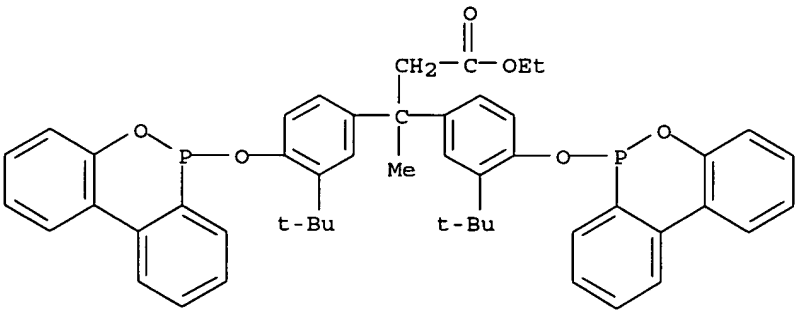
(reaction of, with chlorodibenzoxaphosphorine)

IT **73269-04-2P 73269-05-3P 73274-19-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and polymer-stabilizing activity of)

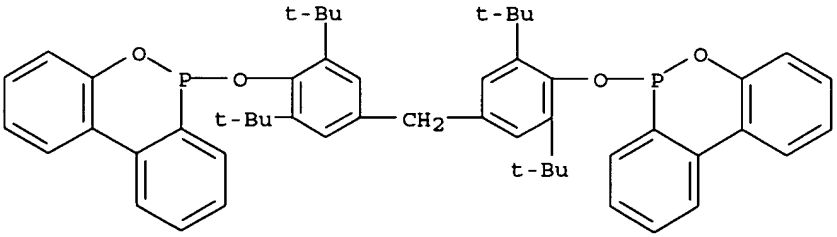
RN 73269-04-2 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[(1-methylethylidene)bis[[2-(1,1-dimethylethyl)-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



RN 73269-05-3 HCAPLUS
CN Benzenepropanoic acid, 4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-β-[4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-3-(1,1-dimethylethyl)phenyl]-3-(1,1-dimethylethyl)-β-methyl-, ethyl ester (9CI) (CA INDEX NAME)



RN 73274-19-8 HCAPLUS
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[[2,6-bis(1,1-dimethylethyl)-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)

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CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 12:13:01 ON 19 SEP 2005
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

=> d bib abs fhitstr hitrn l20 tot
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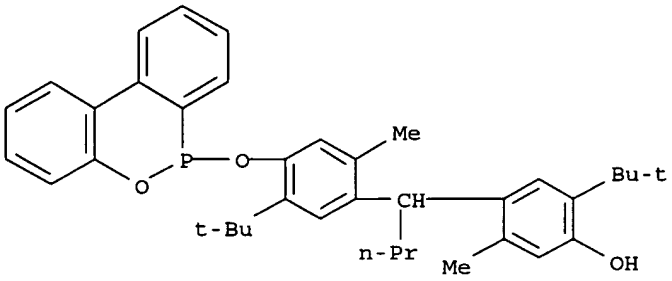
L20 ANSWER 1 OF 1 USPATFULL on STN
AN 2004:262100 USPATFULL
TI Phenolic group-containing phosphonite compound and process for making the same
IN **Lin, Erica**, Taipei City, TAIWAN, PROVINCE OF CHINA
Su, Ching-Yie, Taipei City, TAIWAN, PROVINCE OF CHINA
PI US 2004204602 A1 20041014
AI US 2003-618744 A1 20030715 (10)
PRAI TW 2003-92108102 20030409
DT Utility
FS APPLICATION
LREP Joseph W. Berenato, III, Liniak, Berenato & White, LLC, Suite 240, 6550 Rock Spring Drive, Bethesda, MD, 20817
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 406
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A phenolic group-containing phosphonite compound has the following formula (I) ##STR1##

wherein R.sub.1, R.sub.2, R.sub.3, R.sub.4, R.sub.5, and R.sub.6 independently of one another are hydrogen or C.sub.1-C.sub.18 alkyl, n and m are integer numbers ranging from 1 to 3, and the sum of n and m ranges from 2 to 4, and X is sulfur or C.sub.1-C.sub.8 alkylene which may be optionally substituted with at least one C.sub.1-C.sub.6 alkyl if the sum of n and m is 2, is a trivalent moiety of C.sub.3-C.sub.7 aliphatic group if the sum of n and m is 3, and is a tetravalent moiety of C.sub.4-C.sub.10 aliphatic group if the sum of n and m is 4.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **773105-02-5P**
(phenolic group-containing phosphonite compound stabilizer for polymers)
RN 773105-02-5 USPATFULL
CN Phenol, 4-[1-[4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-5-(1,1-dimethylethyl)-2-methylphenyl]butyl]-2-(1,1-dimethylethyl)-5-methyl- (9CI) (CA INDEX NAME)



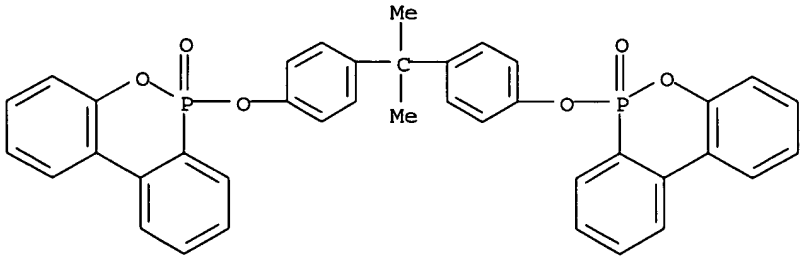
IT **773105-02-5P**
(phenolic group-containing phosphonite compound stabilizer for polymers)

=> d bib abs hitstr l21 tot

L21 ANSWER 1 OF 7 USPATFULL on STN
AN 2005:118518 USPATFULL
TI Method for preparing a biphenylphosphonate compound
IN Su, Wen-Chiung, Taipei City, TAIWAN, PROVINCE OF CHINA
Sheng, Chin-Shang, Longtan Township, TAIWAN, PROVINCE OF CHINA
PA Chung Shan Institute of Science & Technology, Lungtan, TAIWAN, PROVINCE OF CHINA (non-U.S. corporation)
PI US 2005101793 A1 20050512

AI US 2004-972396 A1 20041026 (10)
PRAI TW 2003-92131729 20031112
DT Utility
FS APPLICATION
LREP BACON & THOMAS, PLLC, 625 SLATERS LANE, FOURTH FLOOR, ALEXANDRIA, VA, 22314, US
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 302
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method for preparing a biphenylphosphonate compound of the following formula (I): ##STR1## wherein n is 2 or 3; Ar is a C.sub.6-C.sub.16 aromatic group; which comprising (a) reacting an o-phenylphenol with a phosphorus trichloride in the presence of a zinc chloride catalyst to form a 6-chloro-6H-dibenz [c,e] [1,2] oxaphosphorin of the following formula (II); ##STR2## (b) reacting a polyhydroxybenzene compound of the formula (III) (HO).sub.n--Ar (III) wherein n and Ar are defined the same as the above, with the compound of formula (II) to form a compound of the following formula (IV) ##STR3## wherein n and Ar are defined the same as the above; and (c) oxidizing the compound of formula (IV) in the presence of water and ozone to form the compound of formula (I).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **847452-98-6P**
(preparation of biphenylphosphonates useful as flame retardant starting from phenylphenol phosphorylation, reaction with polyhydroxybenzene, and oxidation)
RN 847452-98-6 USPATFULL
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, 6,6'-dioxide (9CI) (CA INDEX NAME)

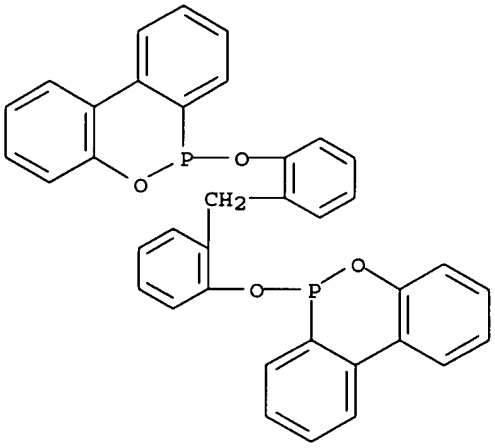


L21 ANSWER 2 OF 7 USPATFULL on STN
AN 2002:217201 USPATFULL
TI Catalyst comprising a complex of a metal of subgroup VIII, on the basis of a phosphonite ligand and method for hydroformylation
IN Maas, Heiko, Schifferstadt, GERMANY, FEDERAL REPUBLIC OF
Paciello, Rocco, Bad Durkheim, GERMANY, FEDERAL REPUBLIC OF
Roper, Michael, Wachenheim, GERMANY, FEDERAL REPUBLIC OF
Fischer, Jakob, Kirchdorf, GERMANY, FEDERAL REPUBLIC OF
Siegel, Wolfgang, Limburgerhof, GERMANY, FEDERAL REPUBLIC OF
PA BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)
PI US 6440891 B1 20020827
WO 9946044 19990916
AI US 2000-623175 20000829 (9)
WO 1999-EP1597 19990311
20000829 PCT 371 date
PRAI DE 1998-19810794 19980312
DT Utility
FS GRANTED

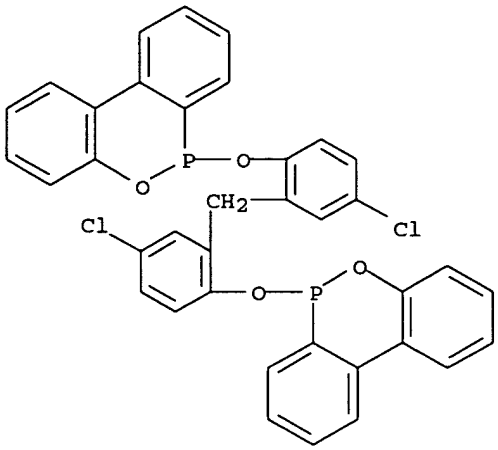
EXNAM Primary Examiner: Lambkin, Deborah C.
LREP Keil & Weinkauf
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 530
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The catalyst comprises at least one bi- or more highly dentate phosphonite ligand of the general formula I ##STR1##

or salts and mixtures thereof and is useful in a process for hydroformylating compounds containing at least one ethylenically unsaturated double bond by reaction with carbon monoxide and hydrogen.

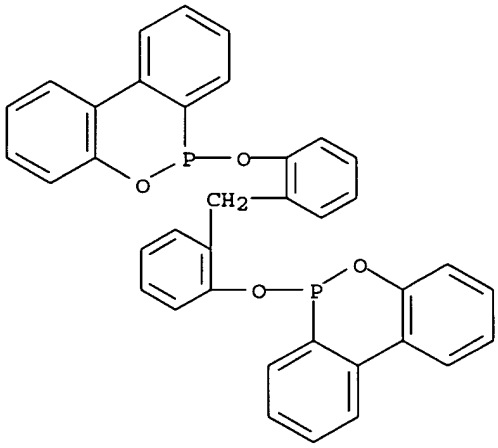
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **214120-52-2DP**, Group VIII metal complexes **221525-10-6P**
(preparation of hydroformylation catalysts comprising a complex of a Group VIII metal and a multidentate phosphonite ligand)
RN 214120-52-2 USPATFULL
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis(2,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



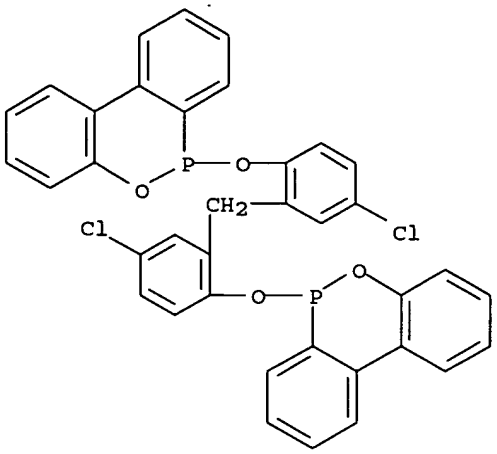
RN 221525-10-6 USPATFULL
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



IT **214120-52-2D**, Group VIII metal complexes **221525-10-6D**,
Group VIII metal complexes
(preparation of hydroformylation catalysts comprising a multidentate phosphonite ligand)
RN 214120-52-2 USPATFULL
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis(2,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



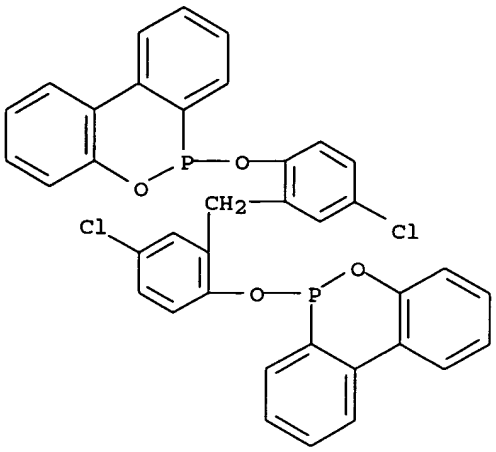
RN 221525-10-6 USPATFULL
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



L21 ANSWER 3 OF 7 USPATFULL on STN
AN 2001:134198 USPATFULL
TI Catalyst comprising at least one nickel(0) complex based on a phosphonite ligand, and the preparation of nitriles
IN Fischer, Jakob, Kirchdorf, Germany, Federal Republic of
Siegel, Wolfgang, Limburgerhof, Germany, Federal Republic of
PI US 2001014647 A1 20010816
US 6355833 B2 20020312
AI US 2001-782762 A1 20010214 (9)
RLI Division of Ser. No. US 2000-508051, filed on 7 Mar 2000, PENDING A 371 of International Ser. No. WO 1998-EP5733, filed on 9 Sep 1998, UNKNOWN
PRAI DE 1997-19740180 19970912
DT Utility
FS APPLICATION
LREP Herbert B. Keil, KEIL & WEINKAUF, 1101 Connecticut Avenue, N.W., WASHINGTON, DC, 20036
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1167
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A catalyst comprising at least one nickel(O) complex which comprises at least one mono-, bi- or multidentate phosphonite ligand of the formula I ##STR1##

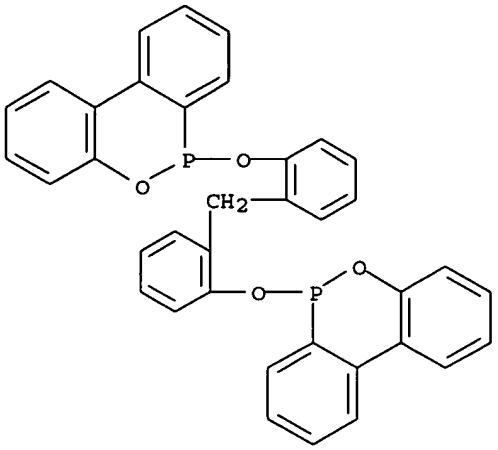
or salts and mixtures thereof, is prepared as described, and the catalysts are used to prepare mixtures of monoolefinic C.sub.5 mononitriles with nonconjugated C.dbd.C and C.tbd.N bonds by catalytic hydrocyanation of butadiene or of a 1,3-butadiene-containing hydrocarbon mixture in the presence of a catalyst of this type.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **221525-10-6P**
(potential intermediate; preparation of nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)
RN 221525-10-6 USPATFULL
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



L21 ANSWER 4 OF 7 USPATFULL on STN
AN 2001:117225 USPATFULL
TI Process for producing aldehydes
IN Urata, Hisao, Yokohama, Japan
Wada, Yasuhiro, Yokohama, Japan
PA Mitsubishi Chemical Corporation, Tokyo, Japan (non-U.S. corporation)
PI US 6265620 B1 20010724
WO 9843935 19981008
AI US 1999-381629 19990927 (9)
WO 1998-JP1362 19980326
19990927 PCT 371 date
19990927 PCT 102(e) date
PRAI JP 1997-75530 19970327
JP 1997-75536 19970327
DT Utility
FS GRANTED
EXNAM Primary Examiner: Padmanabhan, Sreeni
LREP Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
CLMN Number of Claims: 38
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1176
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Aldehydes are produced by reacting an olefinic compound with carbon monoxide and hydrogen in the presence of a catalyst containing a metal of Group 8 to 10 and a phosphonite compound as a trivalent organic phosphorus compound.

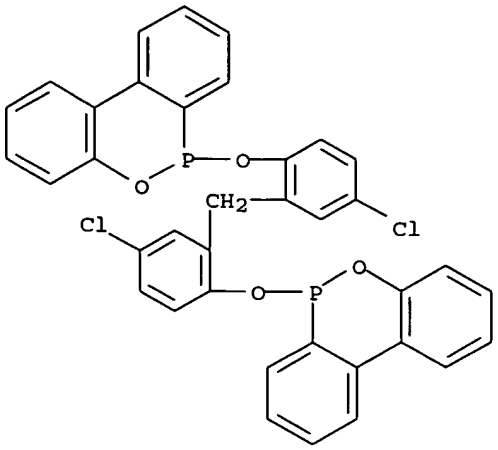
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **214120-52-2**
(process for producing aldehydes)
RN 214120-52-2 USPATFULL
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis(2,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



L21 ANSWER 5 OF 7 USPATFULL on STN
AN 2001:82958 USPATFULL
TI Catalyst comprising at least one phosphonite ligand based nickel (0) complex and method for the production of nitriles
IN Fischer, Jakob, Kirchdorf, Germany, Federal Republic of
Siegel, Wolfgang, Limburgerhof, Germany, Federal Republic of
PA BASF Aktiengesellschaft, Ludwigshafen, Germany, Federal Republic of (non-U.S. corporation)
PI US 6242633 B1 20010605
WO 9913983 19990325
AI US 2000-508051 20000307 (9)
WO 1998-EP5733 19980909
20000307 PCT 371 date
20000307 PCT 102(e) date
PRAI DE 1997-19740180 19970912
DT Utility
FS Granted
EXNAM Primary Examiner: McKane, Joseph K.; Assistant Examiner: Solola, Taofiq A.
LREP Keil & Weinkauf
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1214
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A catalyst comprising at least one nickel(0) complex which comprises at least one mono-, bi- or multidentate phosphonite ligand of the formula I ##STR1##

or salts and mixtures thereof, is prepared as described, and the catalysts are used to prepare mixtures of monoolefinic C.sub.5 mononitriles with nonconjugated C.dbd.C and C.tbd.N bonds by catalytic hydrocyanation of butadiene or of a 1,3-butadiene-containing hydrocarbon mixture in the presence of a catalyst of this type.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **221525-10-6P**
(potential intermediate; preparation of nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)
RN 221525-10-6 USPATFULL
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



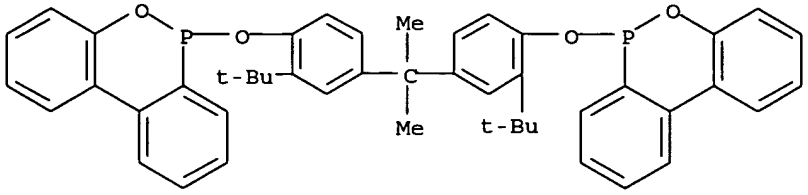
L21 ANSWER 6 OF 7 USPATFULL on STN
AN 80:4406 USPATFULL
TI Cyclic phosphonite stabilizers
IN Rasberger, Michael, Riehen, Switzerland
Spivack, John D., Spring Valley, NY, United States
PA Ciba-Geigy Corporation, Ardsley, NY, United States (U.S. corporation)
PI US 4185006 19800122
AI US 1978-922394 19780706 (5)
DT Utility
FS Granted
EXNAM Primary Examiner: Schain, Howard E.; Assistant Examiner: White, R. A.
LREP Cavalieri, Vincent J.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1,7
DRWN No Drawings
LN.CNT 461
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB New phosphonites of the formula ##STR1## wherein R.sub.1 and R.sub.2 independently of one another are a substituted or unsubstituted hydrocarbon radical, or halogen,

x and y independently of one another are 0, 1, 2 or 3,

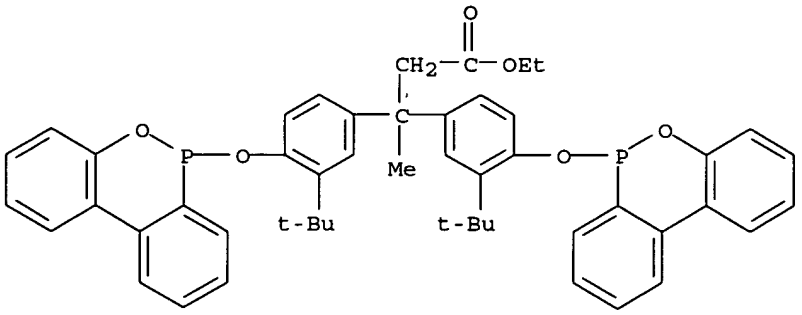
n is 2, 3, 4, 5 or 6, and

R.sub.3 is a n-valent substituted or unsubstituted aliphatic, alicyclic, aromatic, araliphatic or heterocyclic hydrocarbon residue as stabilizers for organic materials.

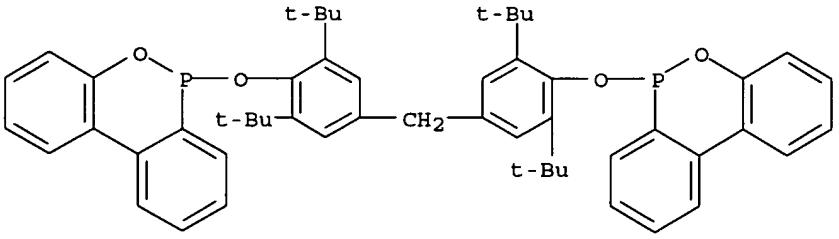
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **73269-04-2P 73269-05-3P 73274-19-8P**
(preparation and polymer-stabilizing activity of)
RN 73269-04-2 USPATFULL
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[(1-methylethylidene)bis[[2-(1,1-dimethylethyl)-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



RN 73269-05-3 USPATFULL
CN Benzenepropanoic acid, 4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-β-[4-(6H-dibenz[c,e][1,2]oxaphosphorin-6-yloxy)-3-(1,1-dimethylethyl)phenyl]-3-(1,1-dimethylethyl)-β-methyl-, ethyl ester (9CI) (CA INDEX NAME)



RN 73274-19-8 USPATFULL
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[[2,6-bis(1,1-dimethylethyl)-4,1-phenylene]oxy]]bis- (9CI) (CA INDEX NAME)



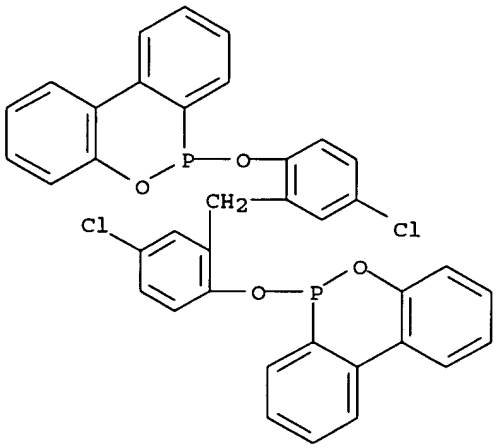
L21 ANSWER 7 OF 7 USPAT2 on STN
AN 2001:134198 USPAT2
TI Catalyst comprising at least one nickel(0) complex based on a phosphonite ligand, and the preparation of nitriles
IN Fischer, Jakob, Kirchdorf, GERMANY, FEDERAL REPUBLIC OF
Siegel, Wolfgang, Limburgerhof, GERMANY, FEDERAL REPUBLIC OF
PA BASF Aktiengesellschaft, Ludwigshafen, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)
PI US 6355833 B2 20020312
AI US 2001-782762 20010214 (9)
RLI Continuation of Ser. No. US 508051, now patented, Pat. No. US 6242633
PRAI DE 1997-19740180 19970912
DT Utility
FS GRANTED
EXNAM Primary Examiner: Solola, T. A.
LREP Keil & Weinkauf
CLMN Number of Claims: 6

Search done by Noble Jarrell

ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 1115
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A catalyst comprising at least one nickel(0) complex which comprises at least one mono-, bi- or multidentate phosphonite ligand of the formula I ##STR1##

or salts and mixtures thereof, is prepared as described, and the catalysts are used to prepare mixtures of monoolefinic C.sub.5 mononitriles with nonconjugated C.dbd.C and C.tbd.N bonds by catalytic hydrocyanation of butadiene or of a 1,3-butadiene-containing hydrocarbon mixture in the presence of a catalyst of this type.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **221525-10-6P**
(potential intermediate; preparation of nickel complex catalyst having a cyclic phosphonite ligand for hydrocyanation of butadienes)
RN 221525-10-6 USPAT2
CN 6H-Dibenz[c,e][1,2]oxaphosphorin, 6,6'-[methylenebis[(4-chloro-2,1-phenylene)oxy]]bis- (9CI) (CA INDEX NAME)



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